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PAPER TRADE JOURNAL

With Which Is Combined

Vol. XCI, No. 19

Thursday, November 6, 1930

Three Paper Mills to Merge in Sorg Paper Co.

New Company Will Include Paul A. Sorg Paper Co., W. B. Oglesby Paper Co. and Frank Smith Paper Co. All of Which Operate Paper Mills at Middletown, Ohio — Capital Structure Will Consist of 30,000 Shares of 6 Per Cent Preferred Stock, $100 Par, and 30,000 Shares Common Stock of No Par Value

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, November 3, 1930.—Four companies identified with the Paul A. Sorg Paper Company, of Middletown, will be embraced in a merger now in process of formation.

Companies in the Merger

The companies involved in the combination, all of which will be placed under one head if the stockholders vote favorably, are the Paul A. Sorg Paper Company, the W. B. Oglesby Paper Company, the Frank Smith Paper Company and the Paul A. Sorg Realty Company.

For the past 13 years the operations of the Sorg Company and the Oglesby Paper Company have been under the same management, and the other two since their inception.

For Economical Operation

At a recent meeting of the board of directors, a plan was adopted by which, it is maintained, efficient and economical operation of the various plants of the companies will result, since all are contiguous and certain of the operations have been consolidated.

Under the plan, the Paul A. Sorg Paper Company will change its name to the Sorg Paper Company and will acquire assets of the remaining three companies, all of which are incorporated under the laws of Ohio.

Capital Structure of the Company

Capital structure of the company will consist of authorized 30,000 shares of six per cent cumulative preferred stock of $100 par value, of which 17,500 shares will presently be outstanding, and 30,000 shares of common stock without par value, of which 17,000 shares will be outstanding. The preferred is callable at $110 a share and accrued dividends.

Under the merger plan, each common stockholder of the Paul A. Sorg Paper Company will receive one share of common in the new company for each share now held.

Preferred Stockholders to Receive Series A

Preferred stockholders of the present Sorg Company, the Oglesby Company and the Smith Company will receive one share of Series A preferred stock of the new company for each share now held. Common capital shares of stock owned by the Paul A. Sorg Paper Company in each of the three other companies will be surrendered and cancelled.

To Begin Business January 1

The Sorg Paper Company, as consolidated, will begin business on January 1, 1931, with a stated capital of $3,450,000. Interim dividends on preferred stocks of constituent companies will be paid January 1. A new deposit agreement has been drawn up by which a committee will act for stockholders in the merger.

Deposit Committee

J. A. Aull, L. C. Anderson, Arthur R. Morgan and John Omwake constitute the committee, with the First National Bank of Cincinnati and the American Trust and Savings Bank, Middletown, as depositaries. Stockholders may become parties to the agreement on or before November 15. The agreement expires January 1.

Capitalization of Present Companies

Capitalization at present of the constituent companies is as follows:—

Paul A. Sorg Paper Company, authorized and outstanding, 2500 shares of six per cent preferred stock, $100 par, and 30,000 shares of $110 par common, 17,000 shares outstanding; W. B. Oglesby Paper Company, authorized 5,000 shares six per cent preferred $100 par, all outstanding, authorized and outstanding 2500 shares common, $100 par; Frank Smith Company, authorized and outstanding 10,000 shares of six per cent preferred, $100 par, and 5,000 shares of $110 par common; Sorg Realty Company, 5,000 shares authorized and outstanding of $100 par common stock.

All of the issued and outstanding common stocks of the Oglesby Paper Company, the Frank Smith Paper Company and the Sorg Realty Company are now owned by the Paul A. Sorg Paper Company, it is stated.

Listed On Cincinnati Exchange

The common and preferred stocks of the Paul A. Sorg Paper and the preferred stock of the W. B. Oglesby Paper Company, are listed on the Cincinnati Stock Exchange, and have been regarded as most desirable investment offerings by buyers in Dayton, Middletown, Hamilton, Cincinnati and other cities.

The later Paul J. Sorg first made a success in the tobacco manufacturing business in Middletown. Later his interests became diversified and he established a paper mill, which led to other enterprises along the same line.

Discuss Plans For News Print Super Merger

Negotiations Reveal Some Wide Differences of Opinion—Formation of a Holding Company Is Regarded as the Main Feasible Plan—Failing That the Grouping of the Companies Into Three Entities With a Common Working Agreement Is Advocated

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 3, 1930.—Plans regarding the proposed super-merger of Canadian news print companies, which have been the subject of a series of meetings between news print executives here, are still being discussed, and all that can be said at present as to the outcome is that while the plan has not yet reached finality, at least the movement has not been backward. So far the negotiations have revealed the wide differences and strong feeling which the events of the past year or so have aroused, and it is understood that there has been some very plain speaking on these points. But it is recognized that recriminations lead nowhere, and that for the good of the companies individually and of the industry generally, it is highly advisable to work in greater co-operation.

The formation of a holding company to control the policy of the leading news print concerns is regarded as the most feasible plan. Failing that, then the grouping of the companies into say three separate entities, with a common working agreement, is being advocated.

In the case of the first-named plan being carried out, the question is as to who could be selected to administer the super-corporation with wisdom and foresight. One name frequently mentioned is that of Ernest Rossiter, president and general manager of the St. Lawrence Paper Mills, who, it is claimed, has all the qualifications for such a position.

In any case it is now recognized that there are no hopes of any increase in the price of news print for a long time to come, and it is even questioned whether it is in the interest of the industry generally to maintain the present price. Manufacturers are deeply concerned over their relations with the publishers, and one of the objects of a merger would be to work more in co-operation with the publishers than in the past.

There are those who hold that the working of the inevitable law of supply and demand must prevail. That would entail a somewhat drastic re-organization. It would mean the closing of high-cost mills until demand more nearly approximates to total capacity, and it might also mean cutting the cost of news print. It is maintained that it would be far better for the manufacturers to get together and take the initiative in these matters than to have these developments forced upon them by events which would tend to disorganize the whole industry.

Meanwhile, current reports include Cyrus S. Eaton as one who may figure fairly prominently in connection with the negotiations for the proposed merger of Canadian news print properties. It is believed among a wide circle of news print men that Mr. Eaton, who is taking a prominent part in the effort to prevent the Youngstown Sheet and Tube-Bethlehem Steel merger, has held a huge block of International Paper stock, and within the present year acquired a large block of stock of Abitibi Power and Paper Company.

Bathurst Plant's Reduced Output

On his return to St. Johns, N. B., from a meeting of the directors in Montreal, A. E. McLean, vice-president of the Bathurst Power and Paper Company, announced that the company would continue its present reduced scale of operations at Bathurst until there was an improvement in present marketing conditions.

To-day the Bathurst mill is operating one of its two paper machines turning out 75 tons of news print a day on a six days a week production or one-half the possible output. The kraft mill, which has a capacity of 75 tons per day, is not working.

There is a report current at Fredericton that a paper mill in Maine is thinking of using the river Saint John to transport its raw material to its mills. The company is said to have an annual large cut at the head waters of the river, on the State of Maine side, and is at present shipping by rail. The proposed plan would mean the conveyance of the raw timber through Canadian territory to a point on the Saint John river, whence it would be shipped by rail to its destination across country at a greatly reduced cost.

Powell River's Progress

The Powell River Company's expansion plan is being pushed ahead vigorously. The plan calls for an expenditure of about $8,000,000 which includes construction of the power plant on the Lois River and installation of an additional paper machine with a capacity of 130 tons of news print daily.

This week news was received here that the boring of the 5,800 foot tunnel to carry water to the turbines had been completed, and that the new machine room is virtually completed and machinery being installed. The whole programme is expected to be completed early in 1931. The company recently cut its prices for news print from $63.50 a ton to $58 a ton and announced that its distribution in western states would in future be undertaken by Blake, Moffitt and Towne, pioneer news print distributors in the Pacific Coast states.

International Paper in British Columbia

Again the International Paper Company is mentioned in connection with pending pulp and paper deals in British Columbia.

The report states that it is known that International has been negotiating for some time with a view to acquiring control of the Canadian Forests Products property at Beaver Cove, Vancouver Island, but whether the deal has actually been closed is so far unknown. Canadian Forest Products represents the reorganization of the old Beaver Cove Pulp and Timber Company, started by the White Brothers of Madison, Wis., some twenty years ago. Mills were built, but the intervention of war prevented development and operation. About four years ago International Harvester interests took over control of the company and announced that a large paper mill would be constructed at once. The disruption of the news print markets has resulted in further suspension of activities.

Another Machine in Newfoundland

From Newfoundland comes the report that the Anglo-Newfoundland Development Company is planning installation of another news print machine at its Grand Falls plant. The present capacity is 375 tons daily; addition of another 150-ton machine will bring output up to 520 tons a day.

The company is completing erection of a steam plant using pulverized coal for the development of 5,000 h.p. Increased power production will take care of greater demands which may be made by installation of another news print machine.

News print production in Newfoundland continues to be maintained at a high rate. In September, Newfoundland mills operated at over 103 per cent of capacity. While output of other North American mills are showing decreases in production, Newfoundland mills recorded an increase of 14 per cent in output for the first nine months of 1930 as compared with the same period in the previous year.

Anglo-Newfoundland Development Co. mill was originally built by the Harmsworth interests of Great Britain, as a source of supply of news print for their papers. News print is still shipped to England.

Fraser Shareholders to Meet

A special general meeting of the shareholders of Fraser Companies, Ltd., has been called for November 4, to be held in Edmundston, N. B., when a by-law will be submitted to give the directors authority to issue an amount not exceeding $30,000,000 principal amount of refunding mortgage and collateral trust bonds. This announcement is made in the form of a letter signed by W. Matheson, secretary. The notice further states that, while only $5,000,000 of these bonds are to be issued and pledged at the present time, the directors consider it desirable that means should be available, if future conditions permit, for the eventual refunding of the mortgage debt of Fraser Companies, Ltd., and its subsidiaries.

Platner & Porter Div. Transfered To Holyoke

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., November 4, 1930—Sidney L. Willson, President of the American Writing Paper Company, last week announced the transfer of the Platner & Porter Division of the Company to Holyoke. This Division transfer will mean that about 70 additional wage earners will be employed in Holyoke. This Division was located at Unionville, Conn., and despite the protest of the Chamber of Commerce there the work of the transfer is now under way. It manufactured "Coupon Bond" as its leading product.

President Willson explained that this transfer was only a step in the plan to have all the outside divisions closed when practicable and the business transferred to Holyoke. In a public statement this past week he said:

"It was planned to eventually concentrate all of the operations in Holyoke and to this end some recent changes have been made. In our Gill division—during the war time business activities a large Fourdrinier machine was installed which has for several years since remained idle. This machine was sold and replaced with a cylinder machine to enable the company to produce in Holyoke the same character of product which has been made in Windsor Locks, Ct., division. This machine is now in operation employing 70 additional local wage earners and relieving to that extent the unemployment condition in the city. The Windsor Locks division has been closed.

"Another move in carrying out the rehabilitation and concentration plan is the transfer of the product formerly made at Unionville, Ct., to Holyoke. This transfer has already been started and in about 60 days will give employment to 70 additional wage earners. The product made at Unionville was Coupon bond—celebrated the country over. Before deciding upon this change, it was necessary to install filtration and refrigeration plants to ensure water of proper purity, color and uniform temperature. The machine in the Unionville plant will be moved to Holyoke—and installed in the building nearest the Holyoke dam, being formerly used as our research laboratory before the latter was removed to Dwight street—Wauregan mill site.

President Willson also gave a number of interesting facts relative to the Company and its plans. After giving a sketch of the history of the Company and its radical change of plan he noted:

"One difficulty in carrying out this plan was lack of ready cash, or banking credit. To secure the cash to carry out this plan was the first necessary step and it was accomplished through liquidation of inventories, through sale of mills, and through use of depreciation reserves. It may be of interest to the public to know that in eight years the company—even during receivership—has not borrowed a dollar from any bank for its operations or rehabilitation—although while in receivership it sold a small amount of receiver certificates in order to pay a local tax claim which had become the subject of considerable unfavorable local comment.

"Since reorganization the company has expended about two and a quarter millions ($2,250,000) for replacements to a large extent—needed repairs and remodeled for new equipment. This work has been done by Holyoke labor. Since reorganization up to date, the company has paid its 1700 employees $12,900,000 as compensation for services, which has become part of the purchasing power so badly needed under present business conditions.

"The plans for rehabilitation have not yet been completed—but there is no cessation in the work as it is the policy of the company to give employment to as many as possible without detriment to the interests of its stockholders.

New Freight Rates on St. Lawrence Division

WATERTOWN, N. Y., November 3, 1930.—At a gathering of Chamber of Commerce officials, businessmen and paper manufacturers held this week at the Black River Valley Club it was announced by officials of the New York Central that the railroad would make the new main line freight rates on the St. Lawrence division granted in the recent Eastern Class Rate decision applicable to all branch lines in Northern New York despite a resulting decrease in revenues. George H. Ingalls, vice president of the company, said that the railroad had decided to waive the arbitraries granted it by the Interstate Commerce Commission and give shippers on branches to other Northern New York points the same advantages as are now applicable on the main line under the new rates. As a result paper mills and other industries throughout the entire section will receive the same set of rates as were recently established on the main line. Among those at the meeting were Joseph A. Quinlan, traffic manager of the St. Regis Paper Co., G. H. Clark, traffic manager of the New York Central, and R. J. Menzies, assistant traffic manager of the company.

Officials of the railroad commended the work of the New York Development Association and Mr. Quinlan to whom credit is given for having brought about the new rates through a series of conferences. Tribute was also paid to Floyd L. Carlisle as one of the biggest industrial leaders in the country and a man who has done much to promote the development of Northern New York. The address given by Mr. Ingalls follows in part:

"The New York Central desires to do everything within its power to foster and develop Northern New York. Representations have been made to it by some of the outstanding industrial leaders of that territory that by placing class rates upon the basis which the railroad is now willing to concede it will make a contribution inestimable in value to the progress of the entire section. It sincerely hopes that forecast will be substantiated by developments in the future. Northern New York now produces and in the future will produce in even larger volume commodities which its people desire to market and which the railroad is equipped to haul in an efficient manner. The line is dependent upon the industries in Northern New York for a very appreciable percentage of its revenues just as they are dependent upon it for service."

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 5, 1930.—The Government Printing Office has received the following bids for 20,000 pounds of manila calendered tag board in 23¼ inch rolls; Barton, Duer & Koch Paper Company, at 7.2 cents per pound; Whitaker Paper Company, 7.17 cents; and Perkins-Goodwin Company, 6.85 cents. The following bids were also received for 20,000 same salmon; Barton, Duer & Koch Paper Company, 7.84 cents; Whitaker Paper Company, 7.81 cents; and Perkins-Goodwin Company, 7.35 cents.

Paper Demand in Philadelphia Restricted

While Individual Orders Are For Small Quantities These Bulk Up Well In the Aggregate—A Number of Paper Houses Expect to Show Fine Financial Statements At End of Year—Douglas W. Bond, Treas. of D. L. Ward Given Testimonial Dinner

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., November 3, 1930—With salesmen exerting every effort to land sizable purchases there still is the tendency on the part of both consumers and dealers to confine stocks to a minimum despite the many attractive offers which are made to encourage buying. A few dealers are contented to let their business continue along this line of trading and while others complain that they are not able to make profitable transactions, the merchants who are optimistically promoting small buying are finding that in the long run business sums up in fairly good volume despite the higher over head. One of the most prominent wrapping paper dealers with subsidiaries outside Philadelphia for the sale of both fine and wrapping papers, has been bringing this phase of stocking for immediate requirements only to the attention of his customers with excellent results.

Fine Paper in Specialty Market

A few fine papers of seasonal type are moving such as announcements, book covers to correspond with these, social stationery, greeting card stocks, some of the better grades of bristols, and decorative tissues for gift wraps and a few of the better grades of writing papers. The general list is not as active as it should be at this season but small lot orders show increases. Those mill representatives and dealers who sell in volume contracts state that a fair amount of business is being transacted by publishers in coated and bulkier book papers but volume is not on a parity with this season of 1929.

Twines Unsettled

The twine market is much unsettled and the prices the lowest within the post war years. Last week there was reduction in jute twines of from 2 to 3¼ cents per pound. It is stated by twine manufacturers that this reduction is made to encourage buying of twines that have been lagging in warehouses and held over from last year. Similar uncertainty is evident in cotton twines but not as drastic reductions have been made recently as in the jute grades. Both cotton and jutes are below values of pre war times.

Report Advances in Business

While the number of paper houses reporting dullness are in the majority there are a few who will give better accounts of business this year and in fact will show a percentage of increase that is most encouraging for these times of uncertainty.

Thomas M. Royal & Co. Shows Increase

The annual statement of Thomas M. Royal & Co., bag manufacturers to be issued next month will show 22 per cent increase in sales in the current year, and a profitable side in the financial returns. The firm, has been adding to equipment to take care of the growing demands for its cellophane faced bags and its standard grades and specialties so that part of the returns have been converted to equipping for the expansions. The company will be represented at the National Coffee Roasters Association Convention to be staged at the Pennsylvania Hotel in New York, November 11 to 14.

Sabin Robbins Paper Co. Shows Large September Sales

Another paper house that will show increased business in the Philadelphia territory is the Sabin Robbins Paper Company, with local branch at 1028 N. Delaware Ave. The local branch enjoyed a 20 per cent increase in September sales and business has been the largest in the history of the local headquarters its manager Howard C. Riley states. The increased business has necessitated two additional staff workers in the shipping department and an addition to the sales organization, Charles Stokes, who will cover Philadelphia.

Testimonial To D. W. Bond

Tribute for the planning of the giant building and the most unique of structures in the matter of architectural combination and construction was paid to Douglas W. Bond, treasurer of the D. L. Ward Company, at a testimonial luncheon given at the Elks Club, on Monday. This building which with the aid of George W. Ward head of the firm, was founded upon a new idea in combination construction with offices, sales rooms, warehouse, vast shipping and garage facilities, and close proximity to two railroads where siding connections are made direct and yet within short range of the City Hall section and down town business centers, has been the focus for occupancy and business of several paper houses including the D. L. Ward Company, now settled on the second floor of the mammoth structure. In outlining the plans of the Ward Company at the testimonial dinner at the Elks Club, President George W. Ward gave the following account of the changes just completed:

TERMINAL COMMERCE BUILDING

"In leaving its old location at 28 South Sixth street, Philadelphia, and moving to the new Terminal Commerce Building at 401 North Broad street, the D. L. Ward Company accomplished two important steps.

"First, it established a new record for moving all office equipment and two thousand tons of stock, everything piled, racked and placed in position, in less than three days. All Departments were in operation until noon Friday, and when the doors opened at 401 North Broad street Monday, morning, every desk and every ream of stock was ready for business as usual.

"The second event ushered in a new era in paper distribution and is worthy of the attention of distributors in all lines.

"The D. L. Ward Company, long a recognized leader among Philadelphia paper merchants, was the first tenant to sign a lease in the Terminal Commerce Building, and was instrumental in the conception of the Building itself.

"Situated over the Reading Freight Station, it is possible to unload cars in the basement, wheel the stock to private elevators and deliver to a point within a few feet of the actual storage space on the second floor. Or if necessary, cases may be wheeled from the cars on one side of the Ward private platform to delivery trucks on the other side and rushed on their way.

"The efficiency and economy of such an arrangement can be readily seen. All offices, all warehouse facilities, all shipping on one floor—it is the answer to the dream of the modern distributor.

"Credit for the idea of moving to the Terminal Commerce Building is given to the Company's Treasurer, Douglas W. Bond. It was largely through his efforts in planning the details of moving that the gigantic task was accomplished without disturbing the business routine for a longer period than Friday afternoon and Saturday morning."

In recognition of his splendid achievement, Mr. Bond was tendered a testimonial at the Elks Club at which time he was presented with a suitably engraved gold pencil and a bound resolution of acknowledgement and thanks.

Other paper houses occupying the new Terminal Commerce Building are the Royal-Keudig Company, the Charles Beck Paper Company, established here for more than 75 years as one of the leading fine papers of the section, the Eastern Paper Company, which has postponed removal until the month of December owing to its seasonal business activity in school supplies which it wholesales and manufacturers, the E. L. Richards Company, Shellmar Products Company, the Milton Bradley Company and the paper converting machinery manufacturing concern of the Charles Beck Machinery Company, linked with the Charles Beck Paper Company interests.

S. Walter, Inc., Extends Warehouses

With the extension in business of the Andrews Paper House, Lehigh Valley Division of S. Walter, Inc., at Allentown, Pa., a subsidiary of S. Walter, Inc., of this city, with main offices and warehouses at 144 N. 5th street, the warehousing accommodations have been expended by the addition of a 125x50 structure running along the Northern Central Division of the Pennsylvania Railroad, and adjoining the headquarters for the Lehigh Valley distribution center of the firm. Simon Walter who is head of the firm, announces that while the increased business which has been enjoyed since the Lehigh Valley Division of the company has been established, necessitated the present expansion of warehousing quarters, he believes that now is the time for the paper industry to look after the needs for the future developments in the upward stride of the trade which is bound to follow the present depression and that more advantageous opportunities are open to the merchants for the acquisition of additional quarters for warehousing or sales offices than at any time since the post war reconstruction and adjustment began, and that a great savings may now be had by foresighted associates in the outlook for future expansion that is sure to come. Mr. Walter, who is a member of City Councils and has been occupying important official connection with the municipal government for more than 20 years and who is chairman of the leading committees of Councils, and a former president of the Philadelphia Paper Trade Association, states that while we are going through the dullest period for a long while, there are evidences of betterment and brighter outlook for the near future when business will be back on normal basis if not even greater prosperity than now is hoped for with the looked for adjustment of the general industrial conditions of the world.

S. Walter Inc. Gives New Occupation

Following a unique policy for the continued employment of workers during the duller periods of the current year, Simon Walter, head of the firm, has inaugurated novel occupation for the staff who might have been discontinued under present stress of lagging demand for paper goods generally. To keep all hands intact Mr. Walter engaged his workers in all branches of the business where there was not enough work to go the rounds, in looking after the minor repairs to the buildings and interior decoration of the structure occupied as headquarters here in N. 5th street. Unemployed workers of the various departments were turned to painting, repairing windows, rebuilding minor damages to the frames of the doors, wood work and replacement of hardware and worn section of equipment, and to a general renovation and redecoration of the building which did not require contractor's expert attention. The result is that the workers have been kept busy throughout the duller summer months and still are on the payroll ready for the reviving interest in the paper trade. It also disclosed additional talents among the workers who were so engaged and who proved to be excellent mechanics as well as expert shipping clerks, sales men and office workers, and the result is that the firm has remodeled and attractively decorated quarters ready for the returning confidence and progress in paper sales.

Changes in International Offices

The entire office force of the Phialdelphia branch of the International Paper Company, have been changed with D. N. Newell, as successor to the management of the Quaker City sales, with headquarters in the Pennsylvania Building for the printing paper division. The new manager comes from the New York headquarters of the International Paper Company where he has been connected for the past six years. The sales representatives now affiliated with the Philadelphia staff are John Vermont and C. Mangles, both having been associated with the Metropolitan staff previous to becoming attached to the local office. A. B. Smith and Vernon Schroff, who formerly were the Philadelphia staff salesmen are no longer associated with the International Company in its local divisions but have been attached to New York offices. The offices in the Pennsylvania Building take care of the territory sales of the International Paper Company's printing papers solely, as the wrapping paper division is under the management of the Southern Kraft Division, with J. H. Wantling, in charge, and with sales offices which are located in the Land Title Trust Building.

Removal of Nashua Gummed & Coated Paper Co.

The local offices of the Nashua Gummed & Coated Paper Company, and the Nashua Package Sealing Company, formerly located in the Widner Building, have been removed to new and larger quarters in the recently built Wilford Building at 33rd and Arch street. The Nashua companies have acquired suites No. 100 in the new structure where are the sales offices of the Philadelphia territory and its manager G. H. Marsh and the staff of John P. Winn, P. J. Hickey and W. G. Snyder. The local offices are the sales quarters of the Nashua Gummed & Coated Paper Company and its subsidiary the Nashua Package Sealing Company of Nashua, N. H.

Discuss Five Day Week at Ottawa

Albany, N. Y., November 3, 1930—Officials of the International Brotherhood of Papermakers have just returned from a conference held at Ottawa, Canada, where plans relative to seeking a five-day-weekly working schedule in that country were discussed. F. P. Barry, vice president of the organization, headed the delegation from this city. About two weeks ago the Ottawa Council of Papermakers passed a resolution calling for their officers to confer with the authorities regarding adoption of the shorter working week and if it becomes effective it would bring about a similar movement in this country. In view of the fact that some mills in Canada are running seven days a week and others on curtailed schedules it is claimed by local labor officials that the new plan would have the effect of stabilizing the industry. Plans are now going forward in connection with the next convention of the International body and in all probability it will be staged at Toronto inasmuch as many of the locals favor that city.

To Stabilize Employment in Ontario Mills

Ottawa District Council of Paper Mill Unions Decided at Meeting Held in Ottawa Last Week To Seek Assistance of Hon. Gideon Robertson, Federal Minister of Labor—Death Duties of Late J. F. Booth Will Amount To About $1,250,000

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 3, 1930.—Dominion Government co-operation in bringing about stabilization of employment in pulp and paper mills is to be sought by the Ottawa district council of paper mill unions. Decision to seek the assistance of Hon. Gideon Robertson, Federal Minister of Labor, was reached at a meeting in Ottawa over the week-end of members of the council. A general note of protest running through the debate at the workers' meeting was that the pulp and paper industry had been developed beyond the market capacity for normal consumption. Resultant unfair competitive practices had demoralized the industry, it was said, and thousands of craftsmen had been thrown out of employment. It was declared certain paper mills in Quebec were operating on Sunday while others could only maintain their staffs on a part-time basis. J. A. D'Soust, organizer of the International Brotherhood of Papermakers, stated that 350 men had been laid off by Quebec paper mills during the past fortnight. When the delegation selected by the council waits upon Senator Robertson setting up of a five-day week, with present wage standards preserved, will be suggested.

Ontario Benefits Through Mr. Booth's Death

Ontario provincial treasury coffers will benefit to the extent of between $1,250,000 and $1,500,000 in death duties from the estate of the late J. Fred Booth, millionaire lumber and pulp king, whose will disposes of an estate valued at approximately $8,000,000. Queen's Park officials in Toronto were unable to say off-hand just how much the province will obtain from the estate but were positive it was a long way over the million mark. The millionaire lumberman died August 5, and his widow, the Toronto General Trust Co., and a son, F. H. Booth, are executors of the estate. The widow and three children are each bequeathed $1,500,000 and life insurance policies account for $1,300,000. Charitable bequests, which are exempt from death duties, total about $500,000.

Barber-Ellis Managers Meet

Managers of the various branches of Barber-Ellis, Ltd., manufacturing stationers, and paper distributors, met in convention at the head office, 384 Adelaide street, West, Toronto, last week, and talked over selling and other problems, including the production of new lines of stationery. Most of the delegates to the gathering brought encouraging reports as to the outlook for business and the firm generally view the future with a great deal of optimism. It was stated that business was gradually picking up and that a goodly number of orders were being booked. Among those at the convention were: Lorne D. Graham, Vancouver, B. C.; Thomas Scott, Calgary; Norman Hutchinson, Regina; James Macey, Winnipeg; Matthew A. Reid, Montreal, and C. G. Ellis, general manager, who presided over the gathering.

Honored Memory of Late Mr. Beck

Among the Toronto representatives of the pulp and paper industry who attended the funeral in Montreal of the late Edward Beck, general manager of the Canadian Pulp and Paper Association, were F. S. Duncan, president of Provincial Paper, Ltd.; George Carruthers, president of the Interlake Tissue Mills, and A. P. Costigane, secretary-engineer of the Ontario Pulp and Paper Makers' Safety Association. The remains were met at Toronto, en route to Detroit for burial, by other members of the paper trade, and floral offerings made. Commenting upon the late Mr. Beck's standing in the industry, Mr. Costigane, a close personal friend of the deceased, said: "The pulp and paper industry in Canada owes to the late Mr. Beck a debt that cannot now be paid. He was a man of great executive ability and his tact and diplomacy were constantly employed in smoothing over any difficulties that might arise. News of his death came to members of the paper trade everywhere as a surprise and a shock. While he was not a man of great physique, yet no one expected fatal termination to the operation for appendicitis which he underwent.

Fibre Board Opens Toronto Office

International Fibre Board, Ltd., which is controlled by Canadian International Paper Co., and the mills of which concern are located at Midland, Ont., and Gatineau, Que., has opened a branch office at 2368 Dundas street, Toronto, in order to enable it the better to serve the growing needs of the Toronto market. In the future all Toronto business will be conducted by the company's own local sales staff. It is stated that International Fibre Board's Toronto market has increased to such an extent that it cannot be properly served by one dealer or even by a distributor, that it, in fact, demands a dealer organization in keeping with the size of Toronto and capable of adequately serving the builders and contractors of the city. Cooperating with this dealer organization will be the local sales staff and the technical staff directly under the supervision of the head office of International Fibre Board, Ltd.

Norton Co. Extends Plant at Hamilton

The Norton Company of Canada, Ltd., has completed an addition to its factory at Hamilton, Ont., which is fully equipped to look after the manufacture of all different sizes of mechanical pulp stones for the pulp and paper industry. The segments of the pulp stones are being moulded, fired and mounted in the Hamilton plant so that it is now possible to carry out all the requisite operations from the commencement right up to the finished product in the one building. The pulp stone factory is very busy at present and has orders booked ahead for several months. The first two pulp stones manufactured completely at the Hamilton plant were shipped to the New Brunswick plant of the International Paper Company.

Notes and Jottings of the Trade

At the annual convention of the Chambers of Commerce in Toronto a few days ago, a signal honor was conferred upon Angus McLean, founder and former president of the Bathurst Power and Paper Company, Ltd., when he was elected president of the organization. Such a choice was in conformity with the interprovincial principle of the Canadian Chambers of Commerce. During the five years of its existence it has elected presidents from the provinces of Ontario, British Columbia, Quebec, Alberta, and now New Brunswick. Mr. McLean is the first pulp and paper man to hold the office.

Neil Powter, of the Toronto advertising department of the Howard Smith Paper Mills, Ltd., is in charge of the company's fine exhibit of Howard Smith papers at the Produced-in-Canada exhibition in the stadium in Montreal. The company is showing, as well, many specialty lines made from its products, including paper cups, and there is also a demonstration of the manufacture of paper from the spruce tree to the finished product.

C. Ernest French, of the Toronto office of the Howard Smith Paper Mills, Ltd., was among the guests at the flying meet held in Brantford, Ont., a few days ago, he having made a solo flight to the gathering.

Fair Paper Demand in the Boston Market

Conditions, However, Are Rather Spotty With Some Varieties of Paper in Active Request and Others Dull—Price Conditions in Kraft Continue Unsatisfactory, But the Belief Is Expressed That the Low Price Has Been Reached—Paper Stock Inactive

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 3, 1930.—As a whole, the demand for paper has been fair in this market the last two weeks. Conditions are more or less spotty. Some dealers are rushed with orders for fine papers, others report spurts, and still others a slowness. High grade manila for printing purposes, such as envelopes and wrappings, is stronger. A moderate amount of wrapping paper has moved, with some dealers seeing indications of an improvement soon, although they do not anticipate a very large demand. So far, the seasonal business expected in wrapping paper has not developed in a normal volume. Price conditions are rather unsatisfactory in kraft, although the opinion is expressed that the low point has been reached. No. 2 kraft has been less unsteady in recent weeks.

In some quarters of the market it is stated that consumers have been buying kraft specialties more than the ordinary brands of wrapping paper. Sulphite and ground wood specialties are firmer. Papers for Hallowe'en purposes were sold in rather satisfactory volume. There has been some improvement in the card board demand.

Box board is generally quiet and in individual cases selling in moderate quantities at best. Values are unchanged.

Paper Stock Market Dull

The paper stock market continues dull. Traveling salesmen find it difficult to secure orders from the mills, representatives of a well known house reporting no demand from manufacturers during the last fortnight. A contributing factor to the lack of demand for paper stock has been the lack of water power. Throughout New Hampshire and Vermont and certain parts of Maine there was a prolonged drought, which curtailed the production of mills. Until rains last week, the Contoocook River, the second largest source of water supply in New Hampshire, had been the lowest in 41 years during the previous two weeks, a condition which caused some mills not in a position to use coal to drop their production 50 per cent. Naturally they needed less raw material. The recent rain has alleviated conditions to some extent, but not enough to better the paper stock situation materially. Dark cottons are a little weaker. They are said to have been offered to the mills by importers at .85, but no sales have been reported at that figure. Current local quotations are .90

Arthur E. Ham & Sons Make Paper Display

Many of the leading artists, printers and advertising men looked over last week the traveling exhibit of the Worthy Paper Company, of Mittineague, Mass., in charge of Ernest Pope, of that company, who arranged to display in the exhibition rooms provided by Arthur E. Ham & Sons, representatives of the manufacturers at 10 High street. All are enthusiastic in regard to the demonstration of the additional value which good printing on good paper gives to any advertising piece. The exhibit showed work from every printing process. A point concerning the use of high grade paper is the fact that in all the specimens containing color the printed result is almost identical with the artists' ideas. The display included marvelous work—on books, one privately printed, brochures and cards—for some of the foremost business houses of the country. This is the fourth time Arthur E. Ham & Sons have had the exhibit, which has been shown in various cities.

Gummed Paper in Good Demand

The New England Paper merchants who distribute the gummed papers made by the McLaurin-Jones Company at Brookfield, Mass., report a steady demand for their white and colored lines, headed by the Jones' Li-Flat and Ideal Grades and for Glassad. Boston printers have produced some excellent advertising pieces printed on the gummed side of Glassad. John Carter & Co., Inc., distribute the Jones Li-Flat brand and Storrs & Bement Company handle the ideal brand in Boston.

General News of the Trade

John Carter & Co., Inc., report increased sales of Tint-Cote Bond and Tint-Cote Folding Translucent, a new line which they are distributing for the Holyoke Card and Paper Co.

Knight, Allen & Clark, Inc., made very satisfactory sales of Hallowe'en specialties in new lines. They included Orange Flametone Vellum and Orange Laidline Cover. This firm is now stocking Dennison tags. The company has handled Dennison gummed paper for some time.

Carter, Rice & Co. Corp. have been mailing to the printing trade folders demonstrating Line-Tone Bristol, a new product of Linton Brothers & Co., Fitchburg, Mass. This line is essentially a printed Bristol, in white and buff, three sizes an dtwo weights, and is equally adaptable for flat, oil or water-color inks. It is not recommended for index purposes.

Albemarle Blottings, made by the Albemarle Paper Manufacturing Company, Richmond, Va., designed especially as an advertising medium and known for its high quality for this purpose, is being handled by the Carter Rice Company. Folders demonstrating Albemarle Halftone Blotting, 120 lb. India, have been mailed to the trade.

Edward Sussenguth, manager of the local office of the American Writing Paper Company, Inc., for a number of years a valued member of that company's staff, and Miss Mary Murphy, of Holyoke, were married Saturday morning, Oct. 25, at the home of the bride. Mr. and Mrs. Sussenguth left for a two weeks' honeymoon.

The Storrs & Bement Company is handling Iris Blotting, an entirely new line in papers of this kind, made by the Wrenn Paper Company, Middletown, Ohio. This colorful paper, made in various pastel shades, for advertising purposes, has a distinctive cloud effect on the printing surface.

At a recent luncheon meeting of the Wrapping Paper Division of the New England Paper Merchants Association, held at the local Chamber of Commerce, John Donovan, one of the assistant coaches at Harvard, gave a talk on football. Floyd H. Blackman, vice-president of the association, presided. Routine business was transacted.

The Lockwood Envelope Specialties Company, Inc., Westfield, Mass., a new company making specialties in cards, envelopes and stationery, has begun manufacturing in the U. S. Whip Company Building.

A state emergency committee on unemployment, organized last week by Gov. Allen, to cooperate with the federal committee of President Hoover, includes the following members of the paper and cordage trades: Philip R. Allen, Bird & Co., Walpole; B. Preston Clark, vice-president, Plymouth Cordage Company, Plymouth; Alvah Crocker, president and treasurer, Crocker, Burbank & Co., Fitchburg; Everett F. Gray, Ludlow Manufacturing Associates, Ludlow, and William F. Whiting, president, Whiting Paper Company, Holyoke.

Paper Mill Wages In Wisconsin Rank First

Conditions Regarding Employment and Wages During September Were More Favorable in the Paper Industry Than Any Other According to the Wisconsin Industrial Commission —Ahdawagam Paper Products Co. to Start Installation of Machinery

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 3, 1930—Conditions relative to employment and wages were more favorable in the paper industry during the year ending in September, 1930, than any other industry in Wisconsin, according to a report of the Wisconsin Industrial Commission. Seventeen employers reduced total employment 3.9 per cent, and aggregate weekly payrolls 6.4 per cent. Some industries averaged as high as 35.7 per cent in employment reduction, and 41 per cent in wage reductions. It is believed that the paper industry will show a gradual increase in orders and production during the remainder of this year.

Henry Kimberly Babcock Passes Away

Announcement is made of the death on October 27 of Henry Kimberly Babcock, at Neenah, Wis. He was closely associated with the paper industry during most of his life. His father was one of the founders of the Kimberly-Clark Corporation, and he himself was active in the organization for a number of years and served on the board of directors. He also was vice-president of the Fox River Paper Co., Appleton, Wis., up to the time of his death.

Mr. Babcock was ill only 24 hours and died from a severe heart attack. He was 53 years old and is survived by his widow, three sisters and one brother. He had been active in the community life of Neenah and served as director of the First National Bank of that city for twenty-five years. He was generous in his gifts to many public projects.

To Start Installation of Machinery

Installation of machinery will be started soon at the new plant of the Ahdawagam Paper Products Company, of Wisconsin Rapids, Wis., a subsidiary of the Consolidated Water Power and Paper Company. The building, measuring 110 by 200 feet is all enclosed and the interior is being finished up. Monitor type design was used, including the latest in lighting and ventilation. Color presses, cutting, creasing, folding and gluing machines are to be installed for the printing of food and display cartons.

Allan Waste Paper Co. Completes Addition

Construction work also has been completed on a large addition to the new plant of the Allan Waste Paper Company, Menasha, Wis. A conveyor system has been installed. The building now has larger working and storage facilities and is equipped to receive and assort paper on an immense scale for mills of the Fox River Valley. The plant is working on a capacity basis.

State Perpetuating Its Forestry

Title to lands in the new Flambeau federal forest unit in northern Wisconsin has been obtained by the government, thus adding 40,000 acres to the areas set aside in the state for perpetuation of forests. Additional lands will be purchased so that by next spring the timber preserve will include at least 100,000 acres. The eventual size of the tract will be about 125,000 acres.

Planting of the Moquah National Forest has been proceeding rapidly and seedlings are now flourishing on 1,000 acres. When fall planting is completed, there will be 2,000 acres in growth. Planting will be continual during the spring and fall seasons until the entire forest area is covered.

Complete Shipments of Pulpwood

Shipping of pulpwood has been completed for the season by the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. The last of the logs rafted from Canada to Ashland, Wis., across Lake Superior are being placed on cars and shipped to the mill. The value of wood handled this season amounts to about $750,000. Approximately 100 men were given employment on this work during the summer.

Nekoosa-Edwards Co. Makes Test Case

Whether an artificial lake belonging to the Nekoosa-Edwards Paper Company, Nekoosa, Wis., is a navigable body of water will be decided at the fall term of the United States supreme court. The Wisconsin Railroad Commission has ruled that the lake is a navigable body of water, and the company made a test case of the issue. The lake will come under the Wisconsin "recapture" law if the court decides it is navigable. A huge pipe line from the lake to the mills is under construction, and the decision has considerable bearing on the company's rights in the use of this water for its mills.

Cities of the Fox River Valley are furnishing opposition to a plan of the Association for the Relief of High Water to have the control dam for water power of the valley at Neenah, Wis. removed. The association is agitating the removal, claiming riparian owners will be relieved of flood conditions. The plan now is to keep the level of Lake Winnebago six inches higher than formerly in the spring. In a season like the one just ended, the drouth made it impossible to sluice the river to remove waste and stench because of the scarcity of water. A higher level maintained in the early part of the season will remedy the low water supply, it is said, and will thwart the plan to remove the control dam which retains the water in Lake Winnebago as a storage reservoir.

General News of the Industry

Newspapers of Wisconsin are giving publicity to the Northern Paper Mills, Green Bay, Wis., through an article appearing in many cities concerning its new tissue machine. An illustration of the machine accompanies the article. The machine is described as the largest, finest and fastest tissue machine in the world, used largely to produce "Northern" tissue. Its maximum production is 150 tons a week.

W. H. Nelson, president of the newly organized Menasha Paper Mills Company, Menasha, Wis., has become resident manager of Cooley & Marvin, of Boston, Mass. He will maintain offices at Menasha for auditing, tax service, cost accounting, engineering and appraisals.

Pupils of one of the public schools of Menasha, Wis., were taken through the Gilbert Paper Company's mills on a study tour recently. The pupils are being taught details of the paper industry in their classes.

To Repair Strathmore Dam

MITTINEAGUE, Mass., November 4, 1930.—The Hampden County Commissioners on favorable report of County Engineer James L. Tighe of Holyoke have approved of the plans and specifications for repairs on the dam of the Strathmore Paper Company between this village and North Agawam. Mr. Tighe reports that the dam to be replaced is a sawed timber crib structure about 450 feet long between abutments and about 18 feet above the streambed. It was built about 65 years ago. Decay in the timber work has caused considerable sagging with loss of head and this it is proposed to correct. The paper company petition was filed October 16 by A. E. Shattuck, assistant treasurer of the company.

for the surest profits look INSIDE your mill

A dollar added to the sales total is a dollar on which you hope to make a profit. But every dollar you can pare from production costs is a dollar added directly to your net.

Every piece of Bird Machinery is designed to do a job better than that particular job has ever been done before. Every piece is also a money-saver doing its job at lower cost.

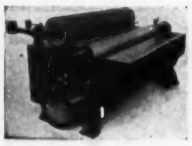
Look inside your mill for profits. Check over each piece of Bird Machinery shown on this page. Imagine it at work in your mill. Then ask us to help you figure the profit you can make on it.

THE BIRD CENTRIFINER

Really clean paper—half the seconds—less sorting—more No. 1 sheets—eliminates sand traps and rifflers — better formation — higher profit — easier sales.

THE BIRD SCREEN

Large capacity—clean paper—no lumps or slime—continuous machine production—lowest screening cost per ton.



THE BIRD SAVE-ALL

Greatest profit on recovered stock—uses fibre in water for sweetening—simple construction—easy to install and operate—low first cost—minimum maintenance.

THE VICKERY FELT CONDITIONER

Prevents shut-downs — increases efficiency of presses—gives more uniform drying — improves quality — increases production.

VICKERY DOCTORS

Make own adjustments — lengthen wire life—reduce breaks—maintain dryer efficiency—improve finish—will not score.

BIRD MACHINE COMPANY

South Walpole - Massachusetts

BIRD MACHINERY

4473

Seasonal Paper Demand Prevails in Chicago

Campaigns To Speed Up Buying, However, Are In Progress and It Is Expected That These Will Have A Helpful Effort—Charles W. Fisher Is Made President of the Blunden-Lyon Paper Co.—Paperboard Industries Association To Meet In New York

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C. W. Fisher Heads Blunden-Lyon Co.

Charles W. Fisher, former treasurer of Blunden-Lyon Paper Company, 323 West Polk Street, Chicago, is the new president of that company according to information which announces that I. Henry Reid, former president, has recently resigned from the organization. The ascendency of Mr. Fisher to the presidency of this well known Chicago paper house is the only change made in the company. Mr. Fisher's former position of treasurer has not as yet been filled. Mr. Fisher came with the Blunden-Lyon organization immediately following two years of service during the World War. He entered as a stock boy and advanced rapidly in the organization holding every position except that of vice president during the twelve years he has been there. Much of his time was spent as a salesman.

The Blunden-Lyon Paper Company was organized nineteen years ago by Mr. Blunden, who left the organization six years ago, and Mr. Lyon, who left three years ago. The firm does a big business in book and printing papers with complete lines of bonds, ledgers, offsets, eggshells—practically a complete line, according to Mr. Fisher, with the exception of coarse papers. In the very near future Blunden-Lyon, continuing a policy of expansion, will add more salesmen to its force in anticipation of a great improvement in business. According to Mr. Fisher, October has been the best month for his organization for some time and he feels certain that the business corner is turned and is confident of continued and steady improvement.

Chicago Paper Association Meets

The regular meeting of the Chicago Paper Association was held at the Bismarck Hotel on Tuesday evening, October 28. Much of the business session centered around a discussion of the revision of the paper bag and kraft lists with the report given out that the manufacturers would submit a new list patterned more closely after the wishes of the jobbers. Members felt that if such was the case the association had done a splendid job that would react favorably on conditions in this market. The association also made preliminary arrangements for its annual banquet and annual business session which will be held on the evening of November 18 at the Bismarck Hotel. The big feature of the annual affair, according to Jim Danehy, secretary of the association, will be the dinner itself. As far as the program is concerned it is highly probable that the Association will make the entertainment almost entirely a "family affair" with the speaking talent coming, for the most part, from members of the Association themselves. An unusually large attendance is expected with members of the Association, salesmen and friends on hand at 6 P.M. for the dinner and the program to follow.

"Here's the One Best Way?"

All dressed up in Hallowe'en colors is the newest mailing from the Heco Envelope Company with the title heading of "Here's the One Best Way." The copy is worth repeating to paper merchants and manufacturers: "Are your customers on a strike? Are they hoarding millions of money—cautiously waiting? Are YOU just WAITING for them to loosen the purse-strings? It'll take a long time for that to happen if you just wait! There is only one way to get your customer to spend his money—and that is to make him want your goods. And the only way to make him want your goods is to sell to him by advertising—advertising—and more advertising!"

Paperboard Industries to Meet

Indications are that the annual meeting of the Paperboard Industries Association at the Commodore Hotel, New York City, on November 18, 19 and 20 will draw an unusually large attendance from Chicago. There is much on the program of interest to the Chicago and middle western group with the annual election of officers as perhaps the most important business to be transacted. The annual reports of the Trade Practice Administration will be particularly interesting as will that covering an extended use of paper board and paper board products. E. R. Hankins of the Container Corporation of America is on the group nominating committtee for the Paper Board Group and Irving Randall is chairman of the group nominating committee of the Folding Box Group. Mr. Randall is connected with the Chicago Label and Box Company. The annual banquet—a feature which was begun only a few years ago—is now one of the high lights of the three day meeting and a large number of Chicago representatives will make a special effort to be sitting at the banquet table when the soup course is passed.

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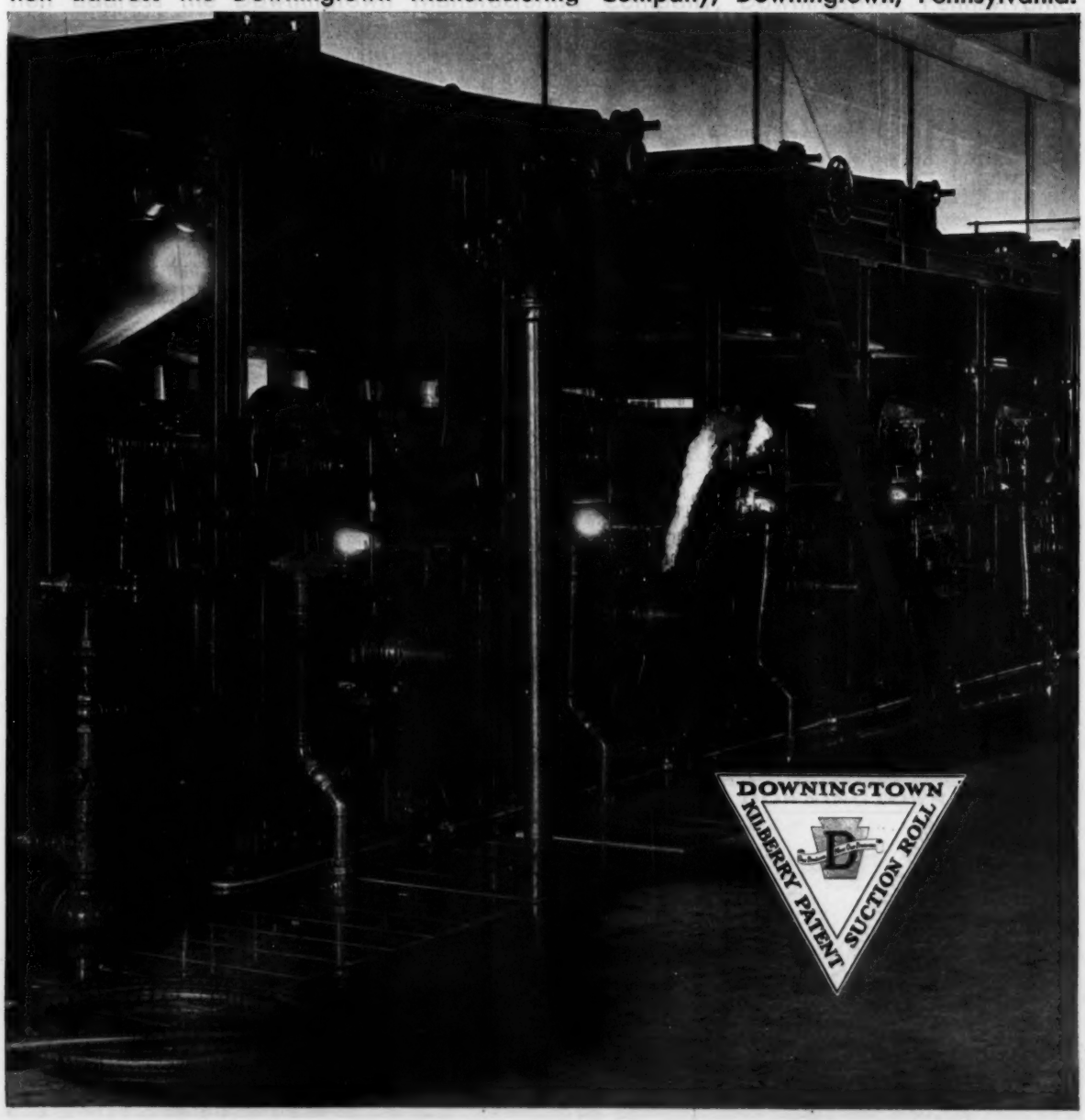
Following his graduation he accepted a responsible position with the Westinghouse Electric and Manufacturing Company which he held for about two years before resigning to take over the supervision of the factory of the Norwalk Iron Works at Norwalk, Conn. After being connected with that concern for several years he decided to leave in order to serve as chief engineer with the Minton Dryer Company at Greenwich, Conn. He had been connected with that firm for the past ten years. The Bagley & Sewall Company is among a few paper machine concerns recently licensed to incorporate the Minton driers in their product, it being claimed that the driers greatly increase the efficiency of machines in withdrawing moisture from pulp.

Downingtown Adjustable Suction Roll on wet felt of a seven cylinder Downingtown Board Machine. ✓ An installation such as this has many advantages. ✓ Downingtown Suction Rolls are built for Cylinder and Fourdrinier Machines for Couch and Press positions, and if desired, can be of the cantilever construction. ✓ For further information address the Downingtown Manufacturing Company, Downingtown, Pennsylvania.



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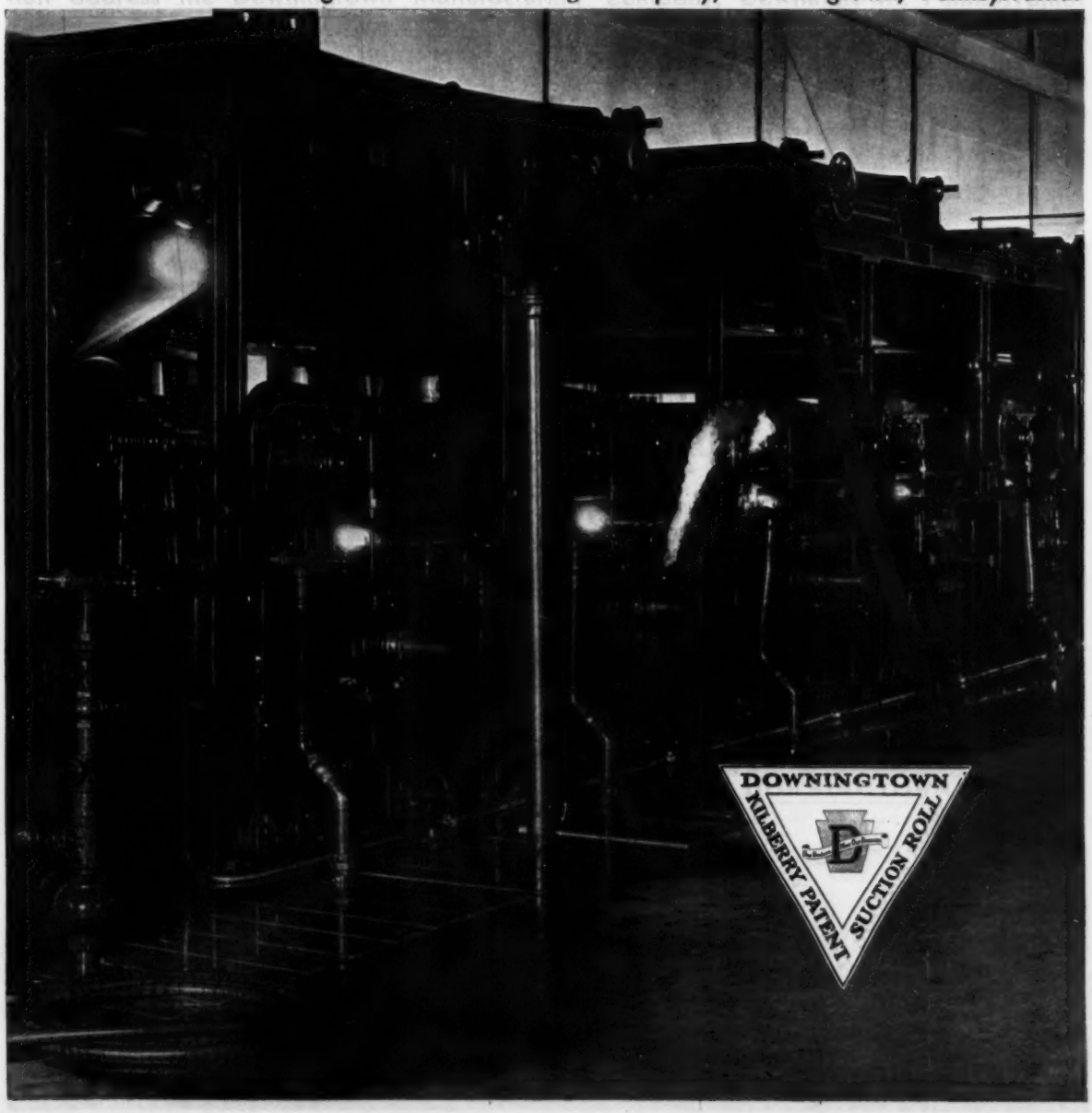


Pusey & Jones Extends Activities Beyond Seas

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., November 3, 1930.—Having achieved a broad reputation in the American and Canadian paper making plants of this Continent the fame of the Pusey & Jones Company, as builders of paper making equipment has extended to lands beyond the seas and throughout the year the Wilmington, Del., plant of the company has been making units that are already in operation in mills in the Scandanavian Peninsula and will be added to the Soviet Government's own paper making plants within the coming year.

Norway Mill Equipped by Pusey & Jones

"Bill" Balderman, one of the most expert of paper making machine erectors on the staff has just returned to the Wilmington headquarters after directing and supervising the erection of a 154-inch, 2-roll news print machine at the Embretsfos Mill of the Union Company of Norway after which he made a trip to Soviet Russia where he discussed the rebuilding under contract already given, of a P. M. No. 1238, a 146-inch Fourdrinier machine, originally installed in 1912 at the Dubrowka Mill near St. Petersburg, now known as Leningrad. The Union Company machine was erected following an order secured from Petter Larsen, Oslo, Norway, to the Pusey & Jones plant in 1929, and who is managing director of the firm of Aktieselskabet Lorentzen and Wettre, agents in Norway for the Pusey & Jones Company, and also in Sweden, Finland, and Russia since 1880. He was accompanied by Anton C. Skjenneberg, technical manager for the Union Company. It is the plan of the Union Company to completely modernize its plants scattered throughout the country of Norway and supplant its small machines with modern giants. A step in the direction was taken in 1928 with the rebuilding of machines at the mill in Geithus and by installation of suction rolls and other modern attachments. In August of last year there was ordered the news print machine No. 1553 designed and constructed to operate at speeds up to 1000 feet per minute producing a trimmed sheet of paper 140 inches wide. It is equipped with Fourdrinier part suitable for wire 154 inches wide, 70 inches long, 30 inches diameter suction couch roll of Beloit cantilever construction, latest improved Van de Carr stock inlet, seven suction boxes with oscillating device, breast roll 20 inches diameter of centrifugally cast brass tubing, 10 inches diameter brass cased return wire carrying rolls, short length deckle strap device and Nash automatic geared wire guide—all of which is specially designed and developed with Skenneberg's technique for the Union Company usage. A short section of the frame next to breast roll may be quickly disconnected and swung on hinges to one side so that breast roll may be lifted to removing position, without interferring with the stock inlet. All the bearings are S. K. F. roller or ball self-aligning type. There are three pairs of press rolls each equipped to carry felt 44 feet long all running in the same forward direction in accordance with high speed practice. The first press has upper roll of granite 22 inch diameter, and lower roll of suction type 25 inch diameter. The second and third presses each have upper rolls of granite 24 inch diameter, and bottom rolls rubber covered 25 inch diameter. The felt carrying rolls are rubber covered 10 inch diameter. The bearings arranged for collar oiling, and the felt rolls arranged for grease lubrication.

The dry part comprises: Thirty-two main driers each 48 inch diameter, one 28 inch diameter receiving drier, and two 36 inch diameter felt driers. The main drier bearings are of latest collar-oiling type arranged for continuous oiling in connection with Bowser filtering and circulating system. The felt carrying rolls are 10¾ inch and 9¾ inch diameters, of turned steel pipe having bronze lined bearings of collar-oiling self aligned type. Compete equipment of automatic tighteners and guides is provided for each of the four felts. The last upper drier and nickel covered spring roll are arranged for threading the paper leader through the driers. Vickery patent ductors are fitted to each lower and last upper drier.

There is one stack of Farrel calendars comprising, 26 inch bottom roll, one 18 inch next bottom roll, and six 13 inch top rolls, equipped with Vickery ductors.

One uniform speed reel of latest design, with the necessary extra winding drums. The machine winder will be provided by the Union Company of similar design to those used on their other machines.

The drives will also be furnished by the Union Company of sectional individual motor type, to be manufactured in Norway by Norsk Elektrisk A. B., from designs under supervision of Brown Boveri Company, Baden, Switzerland branch, and will provide for speed range of 500 to 1000 feet of paper per minute. The weight of the machine is 550 net tons. Mr. Balderman went to Norway in June to begin the erection of the machine and completed it in mid September. The new machine is the second American paper machine furnished Norway and the first a P. M. No. 176, 112 inch wide was sent to a mill now owned by the Union Company by the Pusey & Jones Company back in 1896. The second machine was designed following a trip through several news print mills in this country and Canada in a study of news print machinery as used by the larger manufacturers, by the Norway representatives of the Union Company and the Pusey & Jones Company with General Sales Agent R. S. Johnston, in the group who explained the equipment.

Rebuilding of Dubrowka Mill Machine

The rebuilding of the Russian paper mill of Dubrowka has been authorized by "Sevzaples" the operating commission in U. S. S. R. through Amtorg Trading Corporation, New York City, which involves the installation of modern attachments such as suction rolls, paper handling devices, uniform speed reel, drier steam and water control, and the replacement of worn parts all for the purpose of improving and increasing paper production of news print as well as reconditioning the machinery. It will require two months for the work which will be supervised by Mr. Balderman.

Largest Cylinder Machine Made by Pusey & Jones

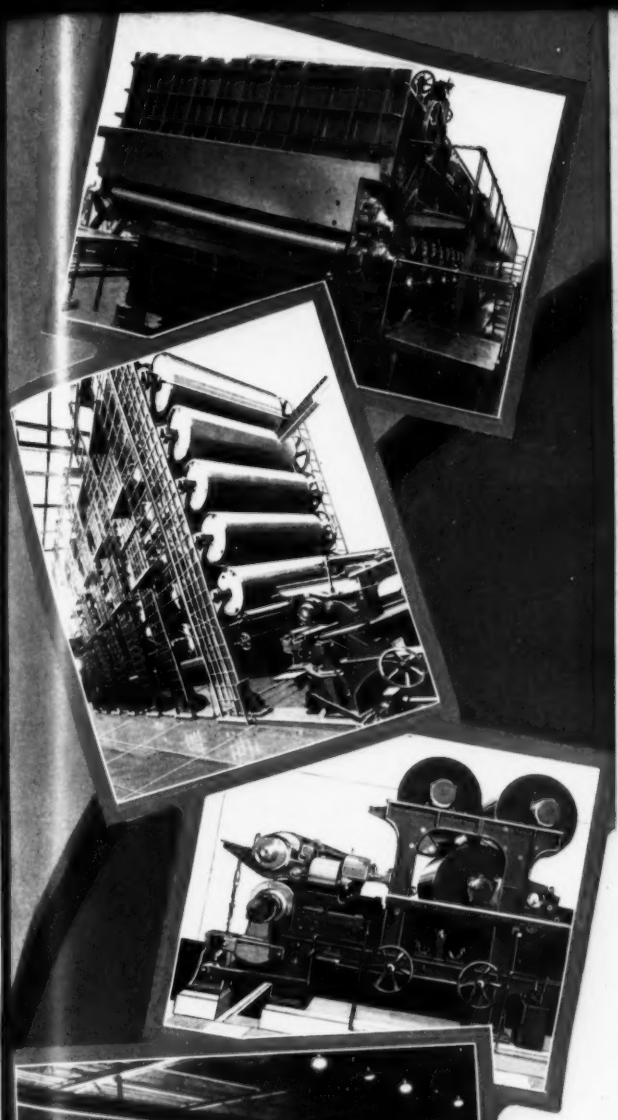
Several American paper mills have acquired new paper machines from Pusey & Jones throughout the year. Two paper machines have been added to the plant of the Brown Paper Company, Monroe, La. One of these is the largest cylinder machine in the world having five cylinders, 60 inches in diameter. It is also equipped with a number of features for the purpose of manufacturing solid kraft liner and board at speed never before attained and a Fourdrinier machine which was completed in summertime.

High Speed News Print Mill for International Paper Co.

There was shipped in late September the last of two machines that will be erected by Pusey & Jones in the plant of the International Paper Company at Dalhousie, N. B. The second of these will be ready for operation by the end of November. When completed the paper machines in the International Mills at Dalhousie will set a world's record for news print producing units as these machines are considered the last word in design, construction and productive capacity. They have a number of high speed features never before used, the direct result of the long and varied experiences of the builders and the purchasers.

New Book Paper Machine for P. H. Glatfelter

A 190 inch book paper machine is being erected in the P. H. Glatfelter Company mill at Spring Grove, Pa., and will be ready for operation soon. It is of the most modern type and will add



PRECISION ALL ALONG THE LINE

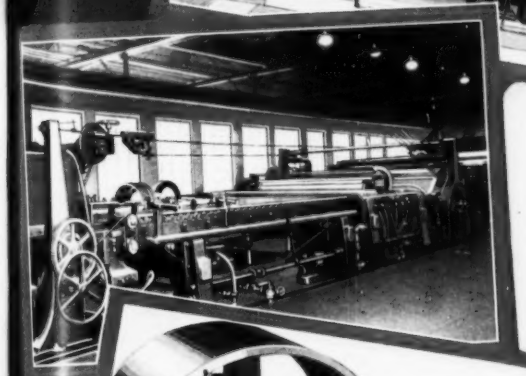
backed by years of specialized experience

If this Company were asked to name the greatest single factor of late years in the evolution of paper making machinery from its earlier crude stage up to the far higher standards of today, the answer would be "precision in manufacture."

To the Black-Clawson way of thinking, "precision" as reflected in the more general use of jigs in manufacture, the adoption of roller bearings wherever possible, insistance upon rolls being in balance while turning as well as while standing still, are among the great achievements.

That the Black-Clawson Company pioneered many of the major developments of recent years—always has been a sticker for precision—is too well known to require comment.

Your inquiry on drives, dryers—whatever you may require—will imply no obligation.



THE BLACK-CLAWSON COMPANY

HAMILTON, OHIO

OWNERS OF HARTLE BROS. MACHINE CO. MIDDLETOWN, O.

EXPORT OFFICE—15 PARK ROW, NEW YORK CITY

THE PROOF OF THE PUDDING"—

When in the market for a jordan you quite naturally want the jordan that comes closest to doing exactly what you want a jordan to do.

That being the case, and it always is the case, which is the most logical thing to do—

Go to a jordan builder who makes just one kind of jordan and trust to luck to adapt the jordan you buy to the requirement—

Or, come to Shartles where you have both long taper and quick taper jordans to choose from—also each in several sizes?

Remember that we build not only good jordans but that we build a line of jordans and are the only manufacturers doing so.

A list of mills using Miamis will be sent upon request.

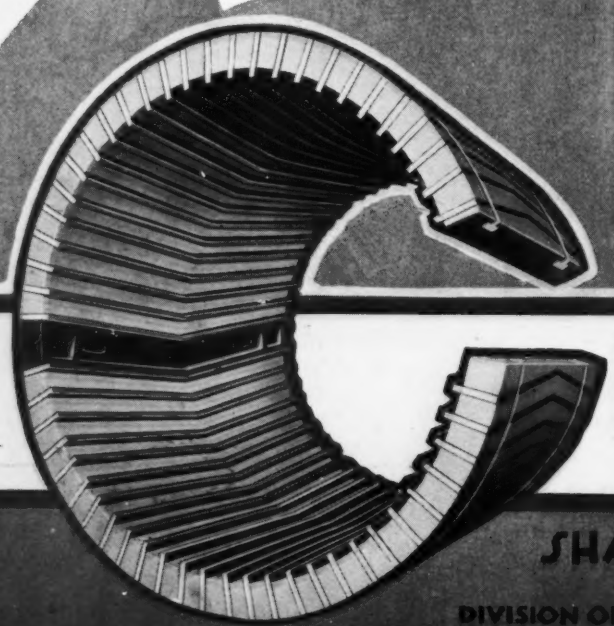
lies in the eating thereof—and hundreds of mills have eaten.

It is easier to "shove in" a Bulldog filling than to "build in" other kinds.

If you use bronze and have specks in your sheet, remember that there is no steel used in a Bulldog filling—no chance for specks to appear in the sheet.

Then, too, they are adjustable to the variations in size of different jordan shells.

Glad to be of service on fillings—always willing to let comparative performance decide the issue between a Bulldog and any other kind.



BULLDOG FILLINGS

THE PIONEER ASSEMBLED FILLINGS AND STILL THE BEST ON THE MARKET

SHARTLE BROTHERS MACHINE CO
MIDDLETOWN, OHIO
DIVISION OF THE BLACK-CLAWSON CO. HAMILTON, OHIO
EXPORT OFFICE 15 PARK ROW NEW YORK CITY

materially to production of the mill. A new building was erected to house the additional unit.

Record Production in Kraft by Albemarle Chesapeake Co., Inc.

Record production of 176 tons of kraft in 24 hours, was the result of the latest installation in the current year of a Pusey & Jones machine 244 inches, or 4 inches wider than the previous record kraft machines at Hodge, La., installed in the plant of the Albemarle Chesapeake Company, Inc., at West Point, Va. This is believed to be the greatest production from any kraft machine in the period. It is the largest in the world in point of tonnage capacity, only being exceeded in width by 6 inches by another machine installed on the Pacific Coast and which is limited in tonnage by drying capacity. The previous kraft production record in speedy equipment was attained by the machine erected in the mills of the Southern Advance Bag and Paper Company, Hodge, La. These records in speeding of kraft establishes the importance of the Southern kraft industry and its rapid strides in recent years to the front ranks of kraft manufacture in the country.

Get Patent On Strip Gumming Process

In order to meet a hitherto unsatisfied demand for a sheet of strip gumming, the McLaurin-Jones Company, Brookfield, Mass., has recently perfected and patented a sheet of exceptionally superior quality for the printing trades. Previously stripped gummed paper was so manufactured that the strips of gumming made very uneven ridges on the reverse side which caused the printer endless trouble and expense. The stock had to be printed first and gummed afterward which caused much trouble and waste.

The McLaurin-Jones strip gummed paper has a perfectly smooth surface on the printing side due to the special patented process of coating and gumming whereby these are equalized and the entire sheet is as regular and even as any coated paper.

Another very valuable feature in that McLaurin-Jones Strip Gumming gives a sheet which is absolutely flat.

This paper has been patented in Europe, Canada, and the United States—and the British patent is already practically disposed of.

One very great advantage to this new process is that any kind of paper, white or colored, and any width of stripping can be furnished. This stripping can be done on any grade of paper stock from the highest class coated papers to the less expensive grades. The McLaurin-Jones Company invites inquiries from the field on any special strip gumming propositions which may be confronting the printing industry today.

At present this will not be a stock line but will be made to order. This line will be handled by the regular distributors of all McLaurin-Jones Guaranteed Flat Gummed Papers, and inquiries through them will receive careful and prompt attention.

Richard Buckley to Manage Piercefield Plant

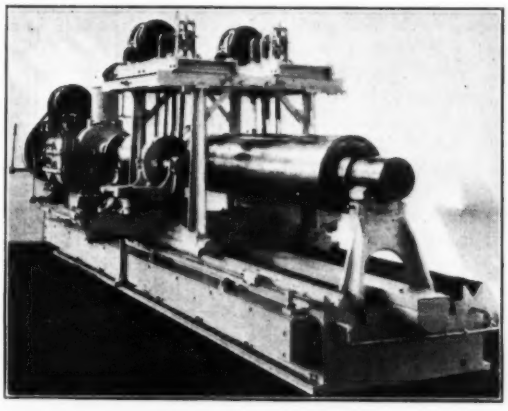
[FROM OUR REGULAR CORRESPONDENT]

FORT EDWARD, N. Y., November 3, 1930.—Following a conference of officials of the International Paper Company this week it was announced that Richard Buckley had been promoted to the position as manager of the Piercefield plant. The change incidentally resulted in the return to the mill here of A. C. Gault, who has already taken over the superintendency. The latter had been in charge of the Piercefield mill for the past several weeks following a recent reorganization of the executive staff in this village.

Mr. Buckley came to the local mill several years ago from the main office and his rise has been rapid. It is said that the mill at Piercefield is one of the largest in the International organization and the selection of Mr. Buckley to the managerial post is regarded as a complimentary tribute to his executive ability.

Lobdell Gear Head Roll Grinders

With the now almost universal practice of the larger paper manufacturing concerns of installing their own grinding rolls as part of the plant units, the popularity of the Type G. H. Roll Grinding Machines, made by the Lobdell Car Wheel Company, Wilmington, Del., has grown since its introduction to the trade three years ago and in the past year has been added to many paper mills and other industries. This new Lobdell All Geared Head Roll Grinder which differs from the older type of belted head machines and still retains all the basic features which have proven from years of services to be essential for correct roll grinding and which have been perfected with more modern ideas for efficient, economical and safe operation, have been installed in the past year in the New Haven Pulp and Board Company, mills at New Haven, Conn.; in the plant of Carolina Fibre Company, Hartsville, S. C.; International Paper Company, Corinth, N. Y.; Mead Fibre Company, Kingsport, Tenn.; Mead Pulp and Paper Company, Chillicothe, Ohio; and in the rubber manufacturing concerns, of the Goodyear Tire and Rubber Company,



LATEST TYPE GRINDER

Akron, Ohio where three have been added; in the plant of the Cincinnati Rubber Manufacturing Company, Cincinnati, Ohio and Archer Rubber Company, Milford, Mass. The new grinder has been added also to the mechanical units in the mills of the Ohio Boxboard Company, Rittman, Ohio which is just ready for operation.

The newest of Lobdell G. H Roll Grinders has among its principal new features all geared self-contained driving head with motor mounted directly on it; completely enclosed gearing, safety chucks and driving bar with no projecting parts to catch the clothing of the operator; fully protected feed screw, running in a bath of oil which is constantly renewed from the circulating oiling system; an oiling system in which oil is circulated by means of a pump through a filter and to all the principal bearings and gears as well as to the V guides of the bed; improved non-scoring roll journal bearings; ring oiling wheel arbor bearings for both sizes of machine; increased rigidity and greater range for crowning device and many minor improvements. It has the Lobdell owned patented automatic crowning device which is affixed to the carriage, through which the rolls are ground crowning to the true arc of a circle in the direction of its length, and is the only crowning device which can be adjusted without grinding and trying.

George G. King Dead

BOSTON, Mass., November 3, 1930.—George G. King, manager of the Holyoke branch of P. Garvan, Inc., dealers in rags and other papermakers' supplies, died at Phillips House here last Monday, after a week's illness. Mr. King had been associated with the Holyoke branch of that firm since 1902 and manager since 1904. He was 58 and resided at 219 Elm street, Holyoke, Mass.

Trade Mark Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, 900 F street, N. W., Washington, D. C., trademark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

PURE-PAK. Ser. No. 283,538. The American Paper Bottle Company, Toledo, Ohio. For paper bottles.

KRAFT WEAVE, and design. Ser. No. 293,359 American Lakes Paper Company, Chicago, Ill. For paper, such as wrapping paper.

KRAFT WEB, and design showing spider webs. Ser. No. 293,360. American Lakes Paper Company, Chicago, Ill. For paper-wrapping.

STRATHMORE PARCHMENT. Ser. No. 300,038. Strathmore Paper Company, Mittineague, Mass. For writing and printing paper.

BERMICO. Ser. No. 301,093. Brown Company, Portland, Me., and Berlin, N. H. For metal end pieces for cores used in reeling up paper.

MONUMENTAL No. 289,141. American Bank Stationery Company, Baltimore, Md. For safety and bond paper.

FRONTENAC with picture of Comte de Frontenac. No. 290,024. Horden's Inc., Chicago, Ill. For writing paper.

AIR-WAY No. 292,961. Air-Way Electric Appliance Corporation, Toledo, Ohio. For paper bags, cartons; envelopes for collecting storing, or shipping materials; dust collectors and holders made of paper, fabric, or paper and fabric.

DUXBAC No. 299,677. Box Blank Corporation, New York City. For boxes composed of pasteboard.

DUXBAC No. 299,678. Box Blank Corporation, New York City. For paper box board.

SATINA No. 299,684. Crown Willamette Paper Co., San Francisco, Calif. For wrapping paper.

SULPAR No. 299,685. Crown Willamette Paper Company, San Francisco, Cal. For wrapping paper.

TEXEL No. 301,485. McKesson & Robbins, Inc., Bridgeport, Conn. For toilet paper.

ARTCOTE. Ser. No. 299,423. Artcote Papers, Inc., New York City. For coated, glazed, lacquered, sized, embossed, processed, treated and gold and silver papers used for cover paper, wrapping paper; cards, greeting cards, etc.

COLUMBINE, & picture of columbine. Ser. No. 304,460. C. H. Hoeckel Blank Book and Lithographing Company, Denver, Colo. For typewriter paper, school tablets, notebooks, drawing paper, fountains pens, pens, penholders, eyelets, etc.

AIR-FLIGHT, & representation of arrow running through it. Ser. No. 304,955. Hano Paper Comporation, New York City. For paper products, namely, bond paper for writing & printing, manifold, drawing, index, bristol, onion skin, cardboards, pads, etc.

FORTUNE BOND. Ser. No. 305,301. George A. Whiting Paper Company, Menasha, Wis. For bond paper.

SUPER-SEAL. Ser. No. 305,380. The Menasha Products Company, Chicago, Ill. For waxed paper.

Thirty Years War Against Building Costs

Morton C. Tuttle Company, engineers, of Park Square Building, Boston, Mass., have just issued a beautifully printed and bound book entitled "My Thirty Years War Against Building Costs," by Morton C. Tuttle, which outlines the theories under which this organization is proceeding in an unconventional, and so far, a successful attack on the ever present building problem.

Anyone concerned with the study of organization and management, whether or not in relation to building and engineering, should find this book both readable and interesting.

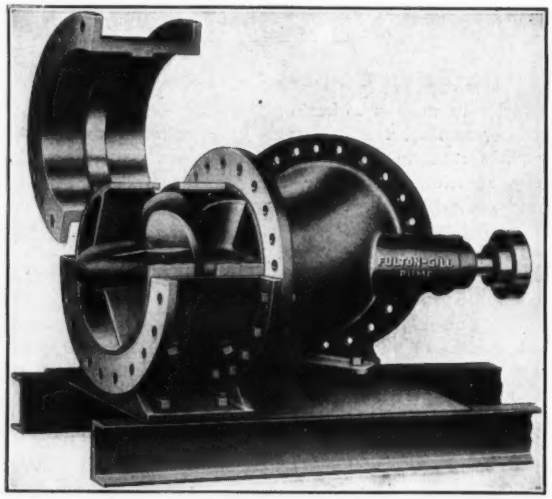
Features of the Fulton-Gill Pump

The Fulton-Gill Axial flow pump recently placed on the market by the Fulton Iron Works Company of St. Louis in its ordinary form consists of an impeller with 3 to 6 blades operating between two sets of guide vanes in a portion of pipe conveying the fluid. An internal bearing is carried by a boss supported by the outlet guides, and the shaft is carried out through a stuffing box, which also supports the thrust bearing.

Another form has been specially made for high consistency stuff and has two impellers revolving in opposite directions in a portion of pipe, the advantage of this type being that no guide vanes are necessary, though there is the complication of the double drive.

Pumps of this latter type have been in use about six months on 6 per cent consistency stock and a repeat order has been received for one to pump 8 per cent consistency against 40 feet head.

In both types of pump the flow is kept axial by a special



NEW FULTON-GILL PUMP

distribution of pitch of the impellers and there is no tendency for solid matter in suspension to separate out and segregate. The action of the impellers in "slicing" the fluid has a useful macerating effect and insures thorough mixing of stock.

Running clearances are large and there is no necessity for fine adjustment so that the pump maintains its efficiency in service.

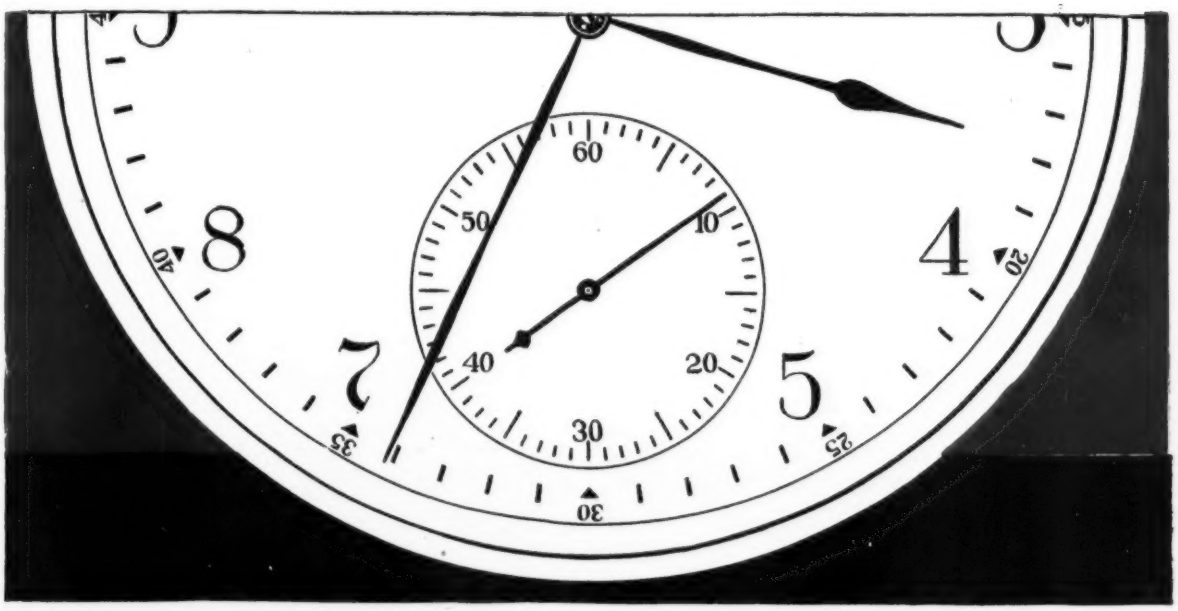
High efficiency pumps of the single impeller type are in use in sizes from 200 to 90,000 G.P.M. In addition to pumping water they have proved themselves for pumping mud and such special fluids as fused nitrates and caustic soda at temperatures approaching dull red heat.

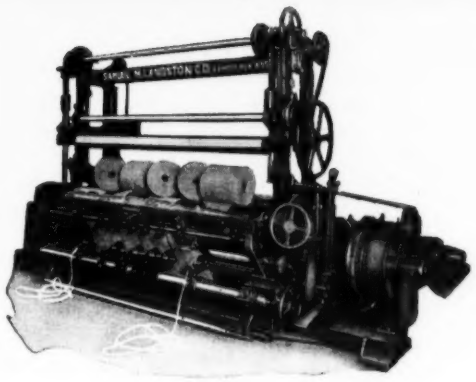
Carew and Hampshire Elect Presidents

SOUTH HADLEY FALLS, Mass., November 4, 1930.—The vacancies in the heads of the Carew Manufacturing Company and Hampshire Paper Company occasioned by the death of William D. Judd were filled the past week by the election of Constant Southworth as president of the Hampshire Paper Company and Courtlandt B. Griffin as president of the Carew Manufacturing Company.

Mr. Southworth is the grandson of John H. Southworth, founder of the mill and son of Charles H. Southworth who served as president until his death in 1906.

Mr. Griffin is son of the late Solomon B. Griffin and also a grandson of John H. Southworth. His father was president of the company for a number of years until his death in 1925. George E. Bardwell of Holyoke, treasurer and sales manager was elected a director of the company.





TIME OUT

Are repairs, adjustments, slow cutter set-ups raising the cost of your slitting and winding? Then you need a Langston! Performance records from dozens of users prove that Langston Slitters and Winders not only produce superior rolls but that they lower production and maintenance costs.

We'll be glad to show you these records, and tell you more about Langston Slitters. Just drop us a line—today.

SAMUEL M. LANGSTON COMPANY

Camden, N. J.

CLEAN
SHEAR CUT
CUT

LANGSTON SLITTERS

New York Trade Jottings

James W. Sewall, Consulting Forester of Old Town, Maine and Port Arthur, Ontario was a business visitor in Montreal and New York recently.

* * *

Visitors to New York last week included A. L. Dawe, of the St. Maurice Valley Sales Company of Montreal, who was in town on business; as were C. H. Jones, of the Mersey Paper Company, Liverpool, N. S., and Morris Hoops of the Finch-Pruyn Company of Glens Falls.

* * *

W. Allan Lindsay, general manager of the Tarentum Paper Mills was in New York last week and in accordance with his expansion policy, has opened an office at 11 West 42nd street for the convenience of Tarentum Paper Mills Eastern customers. John R. Ryan is in charge. Telephone Pennsylvania 9334.

* * *

O. F. Swanson, sales manager of J. Andersen & Co., and the Pulp and Paper Trading Company, New York, is recovering speedily from an operation which took place at the Brooklyn Hospital recently. Mr. Swanson's many friends in the industry will be glad to know that he will be able to leave the hospital this week.

* * *

An interesting weekly meeting and luncheon of the New York Division of the Salesmen's Association of the Paper Industry was held last Monday. R. H. Graeve, supply manager for R. H. Macy discussed the National Retail Drygoods Association project for the standardization and simplification of store supplies, which they are carrying on with the aid of the Division of Simplified Process of the Bureau of Standards.

* * *

A luncheon at which the problems of the paper industry were discussed was held on Monday in the Crystal Room of the Ritz Carlton Hotel. G. Hilmer Lundbeck, president of the Swedish Chamber of Commerce of the United States presided. United States Minister Morehead made an interesting speech as did J. Herbert Case, chairman of the Federal Reserve Bank of New York, and the guest of honor, Governor Ivar Rooth.

* * *

The jobbing paper and twine business heretofore carried on by Wilkinson Bros. & Co. at 419-21 Broome street, New York City, has been amalgamated with the jobbing business heretofore carried on by the H. J. Grey Company at 228-238 E. 44th street. The name of the amalgamation will be Wilkinson-Grey Company and the main office will be 419-421 Broome street. J. M. Wilkinson will occupy with the new concern, the same position as formerly held with Wilkinson Bros. & Co.

* * *

McEwan Bros., Inc., R. B. McEwan & Son and Newark Box Board Company announce that they have consolidated their sales organization and hereafter will operate as McEwan Mills Associates with sales offices at 200 Fifth avenue, New York City, telephone Gramercy 0868 and 0869. Present sales personnel of the three McEwan Mills will continue to solicit business and feel that having a New York Office, will enable it to give better service and facilitate prompt execution of orders. The New York office is in charge of R. B. McEwan, Jr., sale director and J. A. Downs, of MacAndrews & Forbes Company, associate director of sales.

Silicate of Soda In Paper Making

The Philadelphia Quartz Company has just issued a revised edition of its Bulletin No. 6 on the subject of "Silicate Soda in Paper Making." This is one of a series of bulletins describing silicate of soda, what it is and how it is used. Bulletin No. 6 contains much interesting and valuable information of special interest to paper makers and may be had gratis by applying to the Philadelphia Quartz Company, 121 South Third street, Philadelphia, Pa.

Demand Improves in Indianapolis

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., November 3, 1930.—The coming of cooler weather has stimulated paper demand somewhat automatically, but the paper houses in this section appear to have intensified their efforts for business. The approach of the holidays has had its effect on demand also and there has been quite a satisfactory turn for the better. The demand for printing papers in increasing, due to the larger amount of direct by mail advertising being done by the larger companies for Christmas.

The users of specially decorated paper for the holiday trade have been very active in the past month and this year promises to set a new record in highly decorated and fanciful combinations for strictly holiday business. This is particularly noticeable among the candy and tobacco trades, where there appears to be no end to the ideas that are being put in use to effect good display.

The last two weeks, in view of almost perfect weather for building, has seen a fairly steady demand for building papers. This was rather unlooked for, but in many instances it was reported that new construction was twice as great in November than in September. Building paper stocks are low, however, and likely will be kept to as low a point as possible until after inventory.

Paper stock men report little change in their market. The price level is very low and the stocks on hand here are heavier by far than the trade would like to see. The local paper stock men are selling only what is necessary and are crowding their warehouses to capacity in the hope of higher prices before the first of the year.

The news print situation is practically unchanged. There is a little more demand, but the increase is slight and prices seem to be fairly well stabilized. It is believed that after Thanksgiving, there will be a notable change in demand for the better.

Edward Wright Heads St. Lawrence Corp.

POTSDAM, N. Y., November 3, 1930.—Announcement was made this week of the appointment of Edward Wright, for many years connected with the paper industry, to the position as president of the St. Lawrence County Utilities Corporation. From 1918 to 1925 he had control of the interests of the New York World in Northern New York and more recently he was associated with the St. Regis Paper Company in an executive capacity. In 1902 he was manager of the Nashua River Power and Paper Company and he also directed the building of the original mill of the Beaver Board Company.

In his new position he will be located at this place where he will have charge of the power system maintained by the Niagara Hudson system in many of the important industrial cities of Northern New York. Since 1926 when he severed connections with the papermaking industry he has been connected with the Malone Light and Power Company as head of that organization.

Paper Mill Employment Decreases

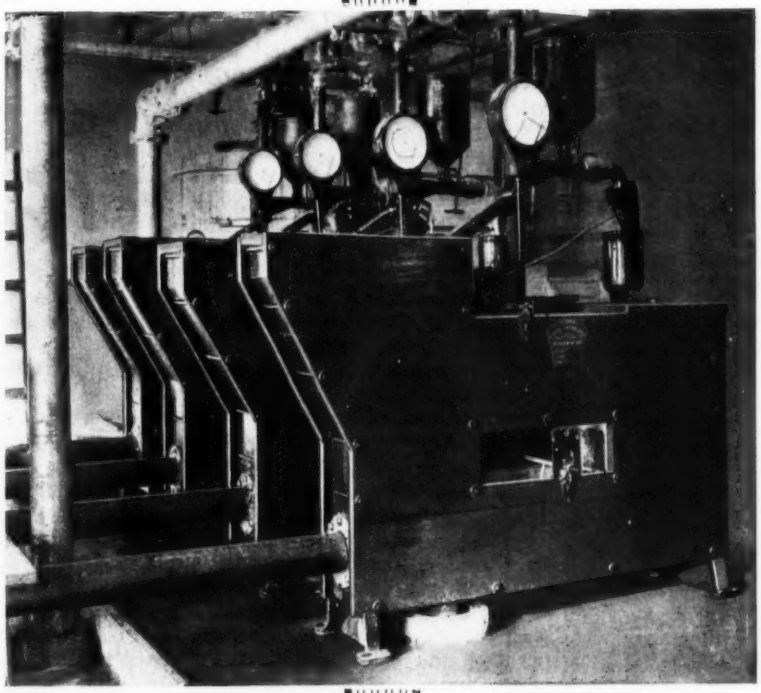
There was a decrease in both employment and payrolls in paper and pulp mills in September compared with October according to reports to the Bureau of Labor statistics, Department of Labor. The paper box industry, on the other hand, showed increases in both employment and payrolls.

Two hundred and ten paper and pulp mills reported their August employment at 57,113 decreasing in September to 55,875 a decrease of 2.2 per cent. The weekly payrolls in these identical mills, also, decreased from $1,452,287 in August to $1,406,837 in September a decrease of 3.1 per cent.

Reports received by the Bureau from 190 paper box factories gave their August employment at 18,532 increasing in September to 18,865 an increase of 1.8 per cent. Payrolls in these plants also increased from $410,801 in August to $423,916 in September an increase of 3.2 per cent.

YOU CAN'T GUESS

. . . and always be right



RELYING on the human element to control stock consistency is costly practice. Because . . . variations are bound to occur. And variations in moisture content result in trouble all along the line—at the slices, on the driers, on the reels and calenders, and most important of all, out in the field where your paper is sold and used. Lost orders, dissatisfied customers, rejects and culls are anything but sources of profit for any business.

Therefore—because final results of paper demand so much upon consistency, and because guesswork is so undependable—the DeZurik Stock Consistency Regulator, which provides accurate *mechanical* control, is necessary equipment in any mill.

All stock, not just a sample, passes through the machine. No power or attention is required. Whenever the density of the stock exceeds the point of consistency for which the machine is set, the proper amount of water is automatically added. A constant head float controls any variation in water pressure. The entire regulating device is completely visible.

The machine is so simple, so comparatively inexpensive—and the function it performs so important a factor in controlling paper quality—that no mill can profitably afford to be without it. Write the Valley Iron Works Co., Appleton, Wisconsin for complete information.

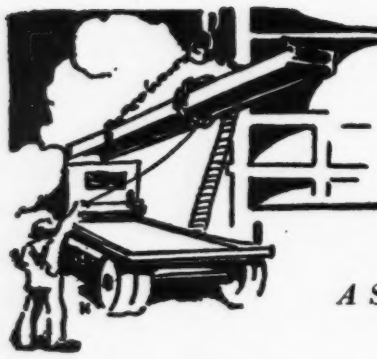
OTHER VALLEY EQUIPMENT

Jordan Engines
Beaters, Breakers, Bleachers & Washers
Flat and Rotary Screens
Screw Presses
Voith High Pressure Stock Inlets
Centrifugal and Stuff Pumps
Laboratory Equipment
Stock Valves — Gate and Plug
Stock Consistency Regulator
Special Machinery

VALLEY

Equipment for Paper and Pulp Mills

New York Office: 350 Madison Ave.
Western Mfg. & Sales Div.: Smith & Valley Iron Works Co., Portland, Ore.
Canadian Representatives: Pulp & Paper Mill Accessories, Ltd., Montreal, Canada



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Appleton, Wis.—The Fox River Paper Company, South Appleton street, has approved plans for a new addition to its mill, to be one-story, equipped as an addition to the beater department, estimated to cost close to $25,000, with equipment. Work will be placed under way at once.

Chicago, Ill.—The new plant to be established by the Jefferson Paper Bag Company, recently organized as noted in these columns last week, will occupy part of the Incubator Building at 6525 South Laurel avenue, Clearing Industrial District. Equipment will be installed at once, including high-speed automatic machines to develop a daily output of over 2,000,000 paper bags of various kinds. It is proposed to give employment to an initial working force of about 60 persons, and a double shift operating basis will be established. The new company is capitalized at $100,000, and is headed by M. N. Miller and A. T. Roberts.

Millwood, Wash.—The Inland Empire Paper Company, Spokane, Wash., has awarded a general contract to the Austin Company, Seattle, Wash., for proposed extensions and improvements in plant, including remodeling of certain present buildings, estimated to cost about $300,000, with equipment. Considerable increase in present capacity will be developed for newsprint and other paper stocks. W. E. Rosebush is treasurer and general manager.

Detroit, Mich.—The Tullar Envelope Company, West Fort street, has work under way on a new addition to its plant to provide for considerable increase in present capacity, reported to cost over $40,000, with equipment. General contract for structure recently was let to M. A. Clausen, Detroit. Stahl & Company, McKershey Building, Detroit, are architects.

Harrisburg, Ore.—The Oregon Straw Fiber Process Company, represented by E. H. Graham, Harrisburg, is considering the construction of a new local mill for the production of straw-fiber products under a special process, initial unit to cost about $30,000. It is proposed to dispose of stock to that amount among local interests and to secure a site in the near future.

San Francisco, Cal.—The Western Paper Stock Company, 2710 16th street, San Francisco, has approved plans for extensions and improvements in storage and distributing plant at 2900 Mariposa avenue, awarding a general contract for construction work to Spivock & Spivock, Hobart Building. The program will cost about $25,000. Company engineering department is in charge of work, which will be placed under way at once.

New York, N. Y.—Aaronson Brothers, 7 Green street, New York, paper stocks, have leased the building at 32-36 Bleecker street for a term of years dating from February 1, and will occupy for a storage and distributing plant for considerable increase in present facilities. It is proposed to remove from present location to new quarters about the time noted.

Montague, Mass.—The Keith Paper Company, Turners Falls, Mass., has awarded a contract to George H. Reed, 24 Franklin street, Greenfield, Mass., for its proposed new water treatment plant for mill service at Montague, reported to cost close to $25,000, with equipment, and work will be placed under way at once. The new unit will be used for filtering, etc.

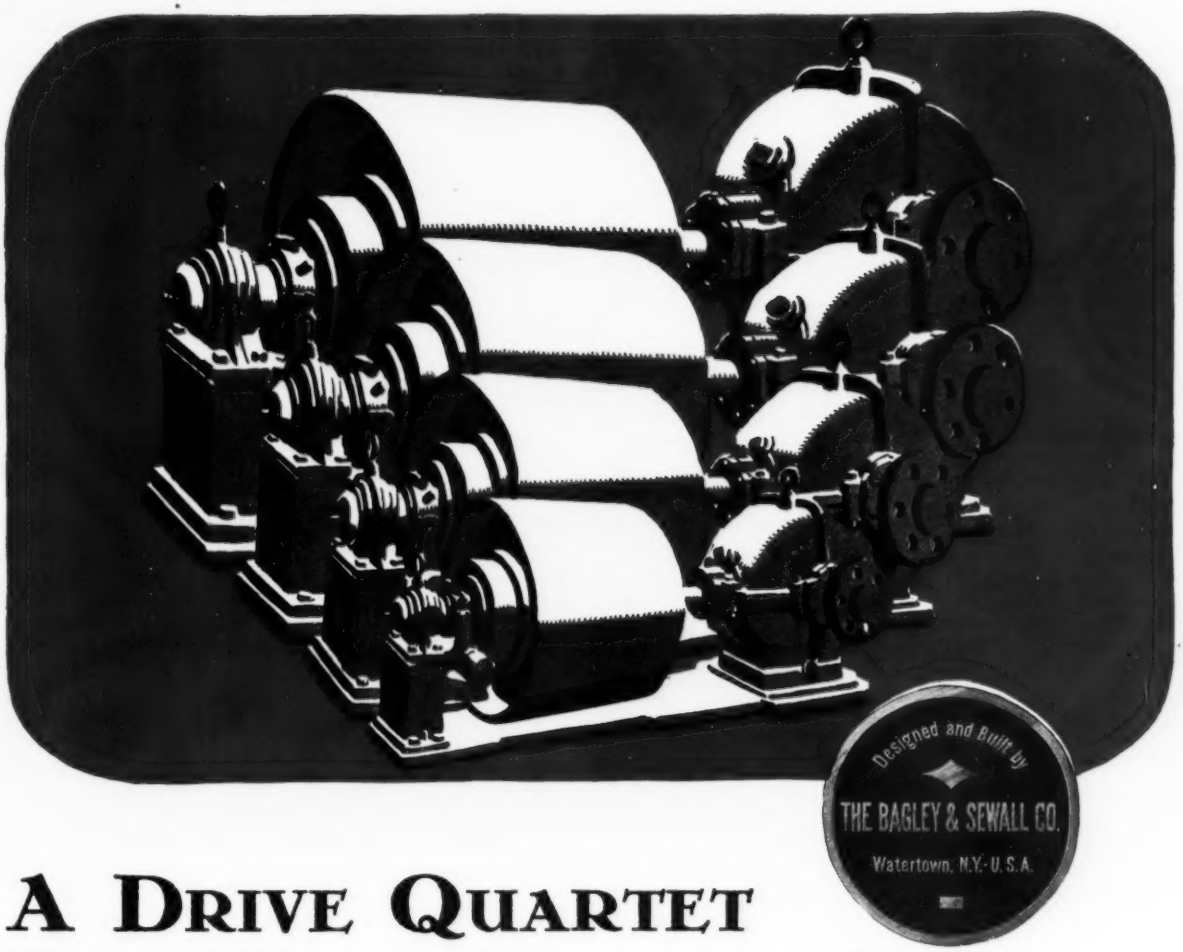
Lockland, Ohio—The Philip Carey Company, manufacturer of roofing papers, asbestos papers, etc., is arranging a financing program, including the issuance of 750,000 shares of common stock, of which 400,000 shares will be exchanged for 80,000 shares of $100 par value stock, now outstanding. A portion of the proceeds will be used in connection with a proposed expansion program at the mill.

Richmond, Va.—The duPont Cellophane Company, Buffalo, N. Y., has advanced construction to a point at its new mill at Ampthill, near Richmond, where the initial units are ready for production of moisture-proof wrapping materials before the time actually scheduled, and it is proposed to start up early in November with a working force of about 200 persons, which will be gradually increased until a maximum quota is reached. The plant consists of a number of buildings and represents an investment of close to $3,500,000. It is expected that an expansion program will be carried out later, probably during next year, for further increase in present rated capacity. H. O. Thayer has been transferred from the main plant of the company at Buffalo to the new Ampthill works, and will act as superintendent in charge of production. J. P. Smith is general director of production at all mills of the company, including the recently established plant at Old Hickory, Tenn., which is now developing a capacity schedule.

Long Island City, N. Y.—The Lily-Tulip Corporation, 122 East 42nd street, New York, is arranging to start night shift operations at its paper cup manufacturing plant at Colgate Point, Long Island City, and will make increase in the present working force. A capacity schedule will be maintained for an indefinite period. Henry Nias is president.

Portland, Ore.—The F. C. Stettler Manufacturing Company, 300 Oregon street, manufacturer of folding paper boxes and containers, has work under way on the rebuilding of its plant destroyed by fire a number of weeks ago, and will push the construction to early completion. Following general contract award to L. H. Hoffman, Public Service Building, Portland, previously referred to in these columns, the company is awarding miscellaneous contracts, including an order for electrical work and equipment to the West Coast Engineering Company, Couch Building, Portland. The new unit is expected to cost over $250,000, with equipment.

Harrisburg, Pa.—The Harrisburg Paper Box Company, 1550-52 Vernon street, is operating with a full working force on a full time production basis for the manufacture of corrugated paper boxes and containers, including folding paper cartons, etc., and will continue on this schedule for an indefinite period. The company states that increased business is being



A DRIVE QUARTET THAT KEEPS MACHINES HUMMING

Four sizes of these Bagley & Sewall Drives . . . four sizes in harmony with every position on paper machines from 60" to 304" wide. Speed reducing models, too . . . and *all* identical in smooth, vibrationless, chatter-free running, velvety starting, finger tip control and space conserving compactness. All metal, precisely cut, perfectly matched gears, running in full oil bath, with splash feed that maintains a constant oil film at all contacts. Anti-friction roller bearings throughout . . . and sturdy stands that add a goodly share to masterful performance. Bagley & Sewall Drives may be installed as a complete drive system or as separate units, at any time, without interrupting production.

We'd like to tell you all about them—write us.

The Bagley & Sewall Co.

51 Watertown, N.Y.

received to carry well over the first of the year. W. J. McClintock is president.

Philadelphia, Pa.—The Satterthwaite-Cobaugh Company, paper stocks, has made a lease for the, four-story building 24x98 feet, at 217 Chestnut street, where present headquarters are maintained, and will use the entire structure for storage and distributing service.

Hull, Quebec—The E. B. Eddy Company, Ltd., is said to be planning an early call for bids for extensions and improvements in its filtration and bleaching plants to cost over $1,500,000, with machinery. Considerable increase is present capacity will be arranged.

Edmundston, N. B.—The Fraser Companies, Ltd., Edmundston, is said to be arranging for authority for a bond issue or issues not exceeding $30,000,000, portion of proceeds to be used for general expansion and operations.

New Companies, Etc.

Providence, R. I.—The Rhode Island Fibre Company, Inc., has been incorporated with a capital of 3000 shares of stock, no par value, to manufacture and deal in fibre products of various kinds. The incorporators are James I. Sheppard, Francis W. Conlan and Herbert Tiemann, all of Providence.

Brooklyn, N. Y.—The Cameo Paper and Merchandising Corporation has been formed with a nominal capital of $5,000, to manufacture and deal in paper goods of different kinds. J. I. Carr, 175 Joralemon street, is one of the incorporators and representative.

Philadelphia, Pa.—Samuel Schultz, Inc., has been incorporated with a capital of $10,000, to deal in wall papers and kindred products. The incorporators are Samuel Schultz, Philip Brody and Morris Yulsman, 6547 North 17th street, Philadelphia. Last noted in treasurer.

New York, N. Y.—The Chelsea Bag and Paper Company has been incorporated with a capital of $15,000, to manufacture and deal in paper bags and other paper goods. D. G. Goodwin, 1482 Broadway, New York, is one of the incorporators and representative.

San Antonio, Tex.—The San Antonio Paper Company has arranged for an increase in capital from $30,000 to $150,000, for general expansion.

New York, N. Y.—The Interstate Mill Supply Company has been organized with a capital of $10,000 and 10 shares of common stock, no par value, to manufacture and deal in paper goods of various kinds. Irving Kay, 545 Fifth Avenue, New York, is company representative.

846 Paper Cases Abandoned

One of the most astounding developments in the history of the United States Customs Court marked the calling for trial of the cases involving paper at the sitting of the court beginning October 14.

On that docket were 1161 cases involving paper. When the call of the docket was completed it was found that importers had abandoned 846 cases involving the importation of writing paper and papeterie. No such wholesale abandonment of importers protests has ever been known in the history of the Customs Court. In every case referred to, the importers were forced to pay an additional duty of 10 per cent because of the decorative effects on the paper. Some of these cases, due to the activity of the Import Committee of the American Paper Industry, had been pending for three years.

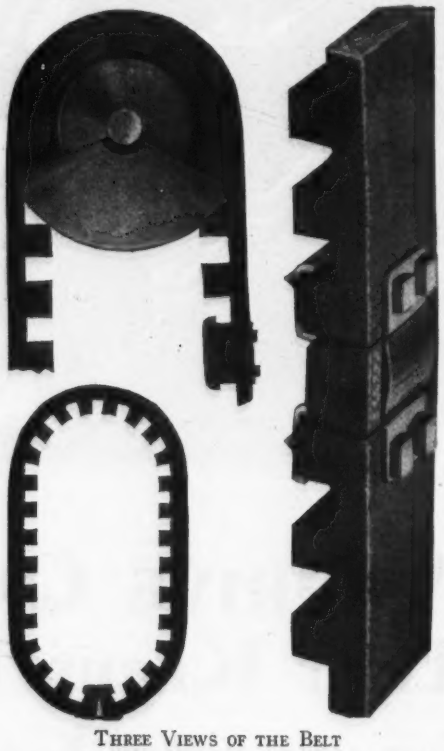
Jaite Co. Incorporates in Oregon

The Jaite Company, St. Helens, Ore., has filed articles of incorporation with capital stock of $100,000, for the manufacture and sale of paper bags. Incorporators are given as Harry O. Strom, L. A. Linville and Clara C. Mercer.

To Manufacture Roderwald Link-Wedge Belt

The Dayton Rubber Manufacturing Company, Dayton, Ohio, announced through its president, J. A. MacMillan, that it has just completed negotiations with the Roderwald Company of Berlin, Germany, for the manufacturing and distributing rights in North, South and Central America of the new Vee shaped Link-Wedge belt. Manufacture of the new belt will start in about sixty days.

"The Link-Wedge belt is constructed of fabric and rubber and was perfected by Herr Roderwald, president of the Berlin Company, after ten years of experimentation, and is of Vee type construction with integral cogs on the inside and runs on a standard Vee shaped pulley. Uses for the new belt are practically unlimited," stated Mr. MacMillan. "The outstanding feature is that



THREE VIEWS OF THE BELT

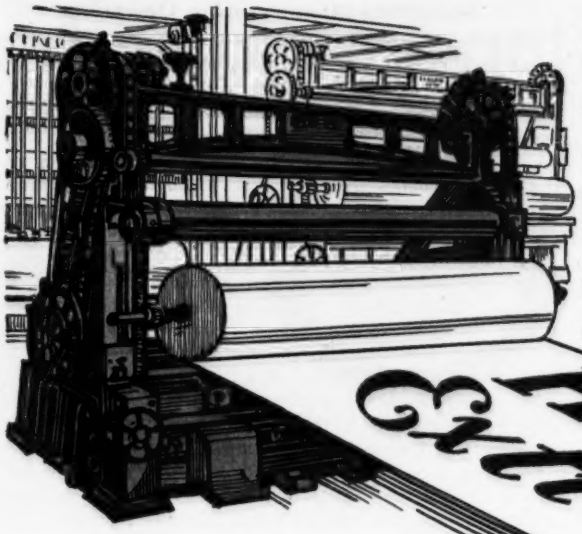
this Vee belt is adaptable, flexible and adjustable to any length desired. A metallic clamp is used to join the ends, and is a feature no other manufacturer has been able to perfect in Vee belts heretofore.

"The new Link-Wedge belt will, therefore, greatly augment our present line of endless Vee belts and throws open to us practically every branch of industry on power drives from fractional to thousands of horse-power, which cannot use our endless belts," continued Mr. MacMillan.

"Germany has already adopted it as standard on its railroads above 1200 watts, and it is in use there on some two thousand cars. It has also been installed on the giant Dornier X airship seating 162 persons, which is now planning a trip across the Atlantic to America.

Also on some of the equipment on the steamships Europa and Bremen which have been vying with each other for ocean speed records.

"We have been negotiating with Herr Roderwald for about two years, and we shall have machinery for the manufacture of the new belts, which is coming from Germany, installed in our plant within sixty days. This increased belt production together with our large production of Dayton Thorobred Tires and Tubes, should keep our plant quite busy during the coming year," concluded Mr. MacMillan.



Here are Extra Profits!

EVERY paper manufacturer is interested in learning *why* certain competitors are so successful. They cannot afford to overlook the facts.

Do you realize that competitors are manufacturing paper of greater uniformity because they are using Uniform Newport Wood Rosins?

These Wood Rosins are produced under a technical control made possible by Newport methods of manufacture. Now here's the big fact worth remembering. Newport Wood Rosins, *in addition* to being clean, free from foreign matter and uniform, are obtainable at actually less cost.

Quality and price combine to make up the "yes" or "no" to your salesman. Offer both. Write today for complete facts.

For Neutral Paper Size — *Regular FF. Wood Rosin*
Landora FF. Wood Rosin
For High Free Rosin Size — *No. 8 FF. Wood Rosin*

Address Our Main Office: *75 East 45th St., New York City* Plants: *De Quincy, La.—Pensacola; Fla.—Bay Minette, Ala.*

GENERAL NAVAL STORES COMPANY, Inc.

NEWPORT

Treasury Department Rules on Novel News

WASHINGTON, D. C., November 3, 1930.—The Treasury Department has held that so-called "novel news" is dutiable under the tariff act if it is in excess of .004 of an inch in thickness. In a communication on the subject to the Collector of Customs of New York City, Secretary of the Treasury, Mellon says:

"The Department is in receipt of a letter from the Appraiser of Merchandise at your port, dated August 20, 1929, in which he reports that since the decision in the Heffernan case, T. D. 43358, certain printing known as 'novel news' has been before his office for classification.

"The Appraiser states the paper is of a thickness of .0045 to .0050 of an inch or over and is used chiefly for printing inexpensive novels, certain types of magazines, and is also used by some of the newspapers. He states that samples of this so-called 'novel news' were submitted to certain paper concerns for an expression of opinion and that with one or two exceptions they all agreed that this class of paper is not chiefly used for the printing of newspapers, although a quantity of similar paper is used by newspaper publishers in their Sunday supplement or in their special departments, and the Appraiser reports that paper used in printing newspapers at the present time varies from .003 to .004 of an inch in thickness.

"Since the receipt of the Appraiser's letter the Department has endeavored to secure information as to the thickness of paper ordinarily used in the printing of newspapers and whether paper in excess of .004 of an inch in thickness is used to any considerable extent, and it is satisfied from the data received that paper in excess of .004 of an inch in thickness is not in general use, in fact it would appear from a list furnished the Bureau that out of 600 newspapers representing papers published in every state in the Union only 71 newspapers were printed on paper in excess of .004 of an inch in thickness.

"The Department is of the opinion that Congress intended to limit to entry free of duty under the provision for standard news print only that kind of paper which is chiefly used in printing the regular editions of newspapers, and the investigation shows that paper in excess of .004 of an inch in thickness represents a very small part of the paper used for that purpose.

"It appears, however, that except as to thickness paper referred to as 'novel news' and like paper which is used for pencil tablets, small circulars, and book pads, falls within the limitations described in T. D. 40996 and has thus far been admitted free of duty, and you are accordingly authorized to admit this paper although exceeding .004 of an inch in thickness free of duty imported within 30 days after the date of this letter appears in the weekly Treasury Decisions and thereafter to access duty thereon under appropriate paragraphs of the tariff act. T. D. 40996 is amended to include in the definition the element of thickness."

Collections Show Improvement

Collections of wholesale and manufacturing firms throughout the country are at least six per cent better than they were a month ago, according to the November bulletin of the National Association of Credit Men.

"From the credit point of view, the outstanding feature of the present business situation is this country-wide improvement in collections," said Dr. Stephen I. Miller, executive manager of the association. "We can see in it a dependable sign of better things just around the corner."

Dr. Miller takes the view that more careful analysis of credit risks and vigorous collection methods are in large measure responsible for the gain in collections.

"We are learning to apply the principles on which sound credit appraisal is based, and to make a more discriminating selection of credit risks," he said. "We have discovered that credit abuses, such as discount piracy and 'terms-grabbing,' give way before a concerted and vigorous attack."

Budgeting Manufacturing Operations

The present competitive situation has tended to force manufacturers to work on closer price margins than at any time during the past several years. The matter of eliminating waste and cutting costs has, therefore, assumed a position of prime importance, because it may well mean the difference between profit and loss in manufacturing operations. In these circumstances, a system of budgetary control has often been found to be a valuable aid in increasing the efficiency and profitableness of manufacturing operations.

The fact that manufacturing executives are tending to give this subject an increasing amount of attention makes particularly timely a report entitled "Budgeting Manufacturing Operations," recently published by the Policyholders Service Bureau of the Metropolitan Life Insurance Company. The facts presented in this report are based on the budgeting practices of more than eighty representative manufacturing concerns. Consideration is given to procedure in developing and administering the production budget, as well as results obtained through its use.

According to the Foreword, the survey was conducted for the purpose of examining methods of budgetary control of manufacturing operations, the cost of which generally represents a large percentage of the total operating cost. Continuity of production is fundamental to stability of employment for the working force. "The planning incidental to budgeting", it continues, "places in the hands of management definite information for outlining the extent of manufacturing operations in advance—a powerful tool for helping to level the peaks and valleys of the employment curve."

The report reviews in considerable detail some of the noteworthy features of budget practices and systems used by the organizations which co-operated in the survey. Among the important aspects of the problem studied are production schedules, material, labor and manufacturing expense budgets; methods of control for plant and equipment expenditures; comparison of actual and budgeted accomplishment, and incentive systems for securing the latter. The publication is illustrated with reproductions of forms and charts.

A limited number of copies of "Budgeting Manufacturing Operations" is available for distribution to industrial executives interested in this subject. These may be obtained by addressing the Policyholders Service Bureau at One Madison Avenue, New York City.

Constant Southworth Heads Hampshire Paper Co.

Constant Southworth of Long Hill, Springfield, Mass., was elected president of the Hampshire Paper Company at a recent meeting of the directors of that company in South Hadley Falls, Mass. Mr. Southworth will fill the unexpired term of the late William D. Judd of Holyoke, Mass., who died a few weeks ago. Mr. Judd has been associated with the Hampshire and Carew mills in an executive capacity for many years.

Mr. Southworth represents the third generation of his family in control of the affairs of the Hampshire Paper Company. His grandfather, John H. Southworth, being one of the founders of the company and a former president, and his father, Charles H. Southworth, serving as president until his death in 1906.

The directors at the meeting approved of the following resolutions on Mr. Judd:

RESOLVED, that in the death of William D. Judd, president of the company, the directors have sustained a great loss, keenly felt by each member. His ability, his integrity and fairness, his sympathy and kindness, his ever ready smile and keen wit, endeared him to the members of this board and to every individual in the organization. His memory will always be an inspiration to those who carry on the business to which he devoted the best years of his life.

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Now is the time to consult the G.T.M.—Goodyear Technical Man. He will save money for you. He will make your job go more easily and smoothly. You will benefit by his wide experience and expert skill in applying Mechanical Rubber Goods to the needs of industry for economy and power. His specialty is movement. Whether it is materials, liquids, air, or engine-power you have to move, he will get the work done for you in the shortest time and at lowest cost.

Your job is paper. The G.T.M. is an expert in your field. He has applied Goodyear Belting with remarkable success on beater drives. He has specified soft-nozzled Goodyear Sanitary Hose and for heavy duty drives, especially where small pulleys are in use, Thor Belts. The G.T.M. knows paper mills and their problems. He is your man, ready for your job.

• • •

To learn of the G.T.M.'s experience in work similar to yours, just write to Goodyear, Akron, Ohio, or Los Angeles, California.

THE GREATEST NAME IN RUBBER

GOODYEAR

BELTS MOLDED GOODS HOSE PACKING

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending August 31, and for the Eight Months Ending August 31, 1930 as Compared with Corresponding Month of Previous Year

IMPORTS—PAPER

	August				Eight Months Ending August 31			
	1929		1930		1929		1930	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
PAPER AND MANUFACTURES	.....	$13,985,751	.....	10,892,703	.....	$105,443,734	.....	$98,594,734
Printing paper—								
Standard news print ....lbs...free	419,444,541	12,322,586	338,560,266	9,795,482	3,103,869,272	93,131,571	3,007,377,229	87,393,351
Imports from:								
Finland ....lbs.	5,659,193	136,534	5,871,839	133,536	42,978,963	1,035,226	57,559,199	1,327,237
Germany ....lbs.	1,195,852	30,123	1,759,882	42,105	13,032,007	321,499	16,030,473	387,520
Norway ....lbs.	95,875	2,642	2,230,824	51,460	4,655,494	116,489	11,768,859	279,192
Sweden ....lbs.	7,601,416	194,116	8,811,041	224,998	67,351,700	1,714,713	90,822,283	2,264,197
Canada ....lbs.	357,286,475	10,626,093	290,327,498	8,473,498	2,810,343,087	85,319,312	2,639,784,085	77,687,586
Newfoundland and Labrador....lbs.	47,571,782	1,332,135	29,559,182	869,885	165,261,273	4,619,037	191,412,330	5,447,619
Other countries ....lbs.	33,948	943	.....	.....	246,748	5,295	.....	.....
All other, n. e. s....lbs...dut.	182,320	10,481	245,289	10,258	2,822,966	136,501	1,851,640	90,170
Greaseproof and waterproof papers....lbs...dut.	246,458	79,567	57,429	8,473	1,159,585	279,705	830,434	259,330
Kraft wrapping paper....lbs...dut.	833,839	35,497	637,163	26,424	6,567,719	284,416	5,445,134	217,013
Other wrapping paper....lbs...dut.	578,407	29,257	315,134	13,999	4,788,043	144,554	1,675,157	98,505
Writing and drawing papers, etc....lbs...dut.	276,983	80,549	288,155	72,583	2,095,853	547,268	2,507,774	635,476
Writing paper and envelope combinations ....dut.	.....	.....	.....	61,466	.....	.....	.....	[2] 104,521
Surface-coated paper ....lbs...dut.	145,998	69,114	142,968	64,922	1,681,076	711,895	1,377,464	560,286
Uncoated paper, decorated or embossed..lbs...dut.	.....	.....	15,909	5,765	.....	.....	[2] 35,085	[2] 12,539
Tissue and similar papers....lbs...dut.	480,716	256,280	.....	.....	3,138,572	1,670,749	[1] 2,056,030	[1] 1,130,184
Weighing not over 6 pounds to the ream ....lbs...dut.	.....	.....	79,972	45,663	.....	.....	[2] 282,868	[2] 157,312
Other ....lbs...dut.	.....	.....	31,315	14,284	.....	.....	[2] 109,404	[2] 42,946
Paper boards, n. e. s.—								
Pulp board, in rolls....lbs...dut.	4,050,542	84,254	2,989,278	61,046	39,944,710	869,247	32,239,664	725,490
Paper board, pulp board, n. e. s., and card board ....lbs...dut.	1,575,221	50,007	801,669	19,038	14,944,944	354,677	9,514,178	229,320
Leather board, test and wall board..lbs...dut.	127,598	4,504	122,886	8,728	1,218,439	48,085	1,232,820	69,333
Cigarette paper, cigarette books, and covers ....lbs...dut.	1,099,364	356,757	919,335	243,578	7,874,511	2,607,047	8,539,694	2,837,610
Hanging paper (wall paper)....lbs...dut	91,369	32,214	90,268	29,164	1,697,508	471,235	1,568,123	460,734
Duplex decalcomania paper, not printed..lbs...free	.....	.....	10,426	2,366	417,668	105,509	345,933	82,804
Paper boxes ....dut.	.....	155,842	....	106,512	.....	1,151,345	.....	884,697
Papier-mache and pulp manufactures, n. e. s. ....dut.	.....	55,689	.....	45,575	.....	299,409	.....	404,515
All other paper and manufactures....dut.	.....	363,153	.....	257,381	.....	2,530,521	.....	2,198,598
WOOD PULP								
Mechanically ground wood pulp....tons..free	22,081	$543,973	.....	.....	150,327	$3,798,804	[1] 128,828	[1] $3,593,166
Unbleached ....tons..free	.....	.....	17,395	$426,875	.....	.....	[2] 38,308	[2] 1,022,141
Bleached ....tons..free	.....	.....	1,588	43,857	.....	.....	[2] 2,143	[2] 58,089
Sulphite wood pulp....tons	92,981	5,458,963	77,748	4,405,340	688,851	40,404,628	660,173	38,292,001
Unbleached ....tons..free	63,084	3,214,795	53,748	2,699,874	463,114	23,308,815	445,913	22,844,388
Bleached ....tons..free	29,897	2,244,168	24,000	1,705,466	225,737	17,095,813	214,260	15,447,613
Imports from:								
Finland ....tons	11,444	576,566	9,043	411,411	77,016	3,722,259	68,597	3,424,984
Germany ....tons	5,260	358,014	5,022	344,303	43,698	3,028,355	44,520	2,993,758
Norway ....tons	7,654	533,870	2,219	118,716	42,789	2,921,110	41,790	2,657,708
Sweden ....tons	33,729	1,883,265	32,556	1,748,847	264,472	14,601,851	248,473	13,594,321
Canada ....tons	33,499	2,033,721	26,606	1,652,783	246,582	15,357,500	243,778	14,943,194
Other countries ....tons	1,395	73,527	2,302	129,280	14,294	773,553	13,015	678,036
Sulphate wood pulp, unbleached (kraft pulp) ....tons..free	32,554	1,720,894	34,504	1,507,002	238,955	12,937,571	230,184	11,314,662
Imports from.								
Finland ....tons	3,791	185,398	3,636	130,992	17,738	844,639	25,588	1,119,041
Norway ....tons	1,999	99,164	1,525	55,322	10,621	564,523	9,495	426,387
Sweden ....tons	16,792	826,589	24,168	1,008,728	132,719	6,745,962	143,629	6,683,016
Canada ....tons	9,600	593,056	5,126	310,321	73,758	4,592,900	48,551	2,957,115
Other countries ....tons	372	16,687	49	1,639	4,119	189,547	2,921	129,103
Sulphate wood pulp, bleached....tons..free	1,302	94,472	664	63,276	11,229	830,996	9,464	741,206
Soda pulp ....tons..free	.....	.....	369	24,999	.....	.....	[2] 852	[2] 58,256
Other pulp ....tons..free	397	29,087	38	3,264	4,005	329,971	2,229	164,368
CRUDE PAPER STOCK								
Rags for paper stock....lbs...free	38,296,205	856,450	16,196,087	242,124	291,413,266	5,987,084	224,525,709	4,605,896
All other paper stock....lbs...free	22,095,931	472,697	16,447,414	163,828	181,410,170	3,673,455	178,984,564	2,404,534
CHEMICALS AND OTHER PAPER MAKERS' MATERIALS								
Colors, dyes, stains, color acids, and color bases, n. e. s....lbs...dut.	441,166	$497,997	307,903	$383,140	5,192,529	5,835,742	3,331,861	$3,560,268
Imports from:								
Belgium ....lbs.	4,712	4,799	4,353	5,356	40,813	51,745	37,582	46,514
France ....lbs.	14,391	35,375	11,830	15,080	98,227	148,607	25,381	32,896
Germany ....lbs.	252,397	250,389	141,988	163,813	3,481,683	3,822,929	2,047,938	2,180,632
Italy ....lbs.	.....	.....	4,031	5,325	8,228	7,074	10,569	12,287
Switzerland ....lbs.	164,083	200,753	134,367	180,003	1,465,677	1,696,835	1,114,475	1,198,089
United Kingdom ....lbs.	980	1,281	9,095	10,232	55,966	62,100	57,779	58,789
Other countries ....lbs.	4,603	5,400	2,239	3,331	41,935	46,452	38,137	31,061
Casein or lactarene ....lbs...dut.	1,267,298	151,644	115,917	6,761	20,702,099	2,476,423	16,220,691	1,793,435
China clay or kaolin....tons..dut.	25,277	271,481	9,829	99,101	179,115	1,946,460	154,839	1,617,763

(Continued on page 50)

1931 EDITION

PRICE $7.50

LOCKWOOD'S DIRECTORY

of the

PAPER & ALLIED TRADES

CORRECTED UP TO DATE

The 56th Consecutive Annual Edition

THE OLDEST INDUSTRIAL DIRECTORY IN THE UNITED STATES

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PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(Continued from page 48)

EXPORTS—PAPER

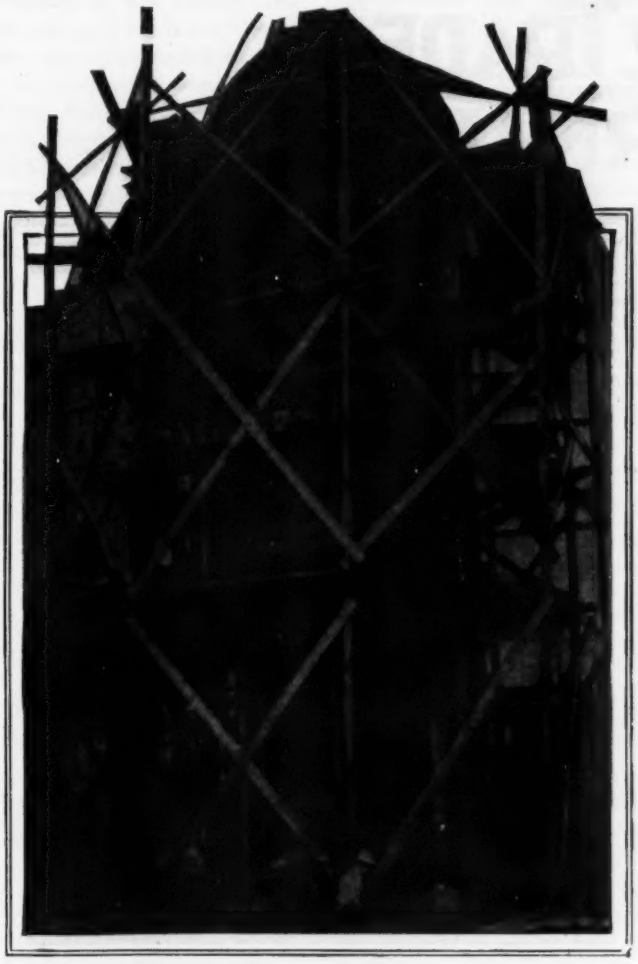
	August 1929 Quantity	August 1929 Value	August 1930 Quantity	August 1930 Value	Eight Months Ending August 31 1929 Quantity	Eight Months Ending August 31 1929 Value	Eight Months Ending August 31 1930 Quantity	Eight Months Ending August 31 1930 Value
PAPER AND MANUFACTURES	.....	$2,893,477	.....	$2,459,585	.....	$24,865,612	.....	$21,593,641
Printing paper—								
News print paper ..... lbs.	2,080,852	75,954	1,536,712	65,993	21,699,872	812,492	14,984,979	614,495
Exports to:								
Europe ..... lbs.	51,296	2,100	265,826	13,802	599,304	38,178	1,401,688	77,462
Canada ..... lbs.	5,770	330	1,956	75	461,483	21,483	50,207	2,006
Central America ..... lbs.	93,308	3,581	92 237	3,026	894,734	32,180	1,003,218	36,166
Cuba ..... lbs.	279,359	10,359	216,549	12,037	2,170,585	80,031	2,290,110	95,339
South America ..... lbs.	1,905,707	36,637	240,273	10,782	6,146,568	228,126	3,344,760	116,195
China, Hong Kong, and Kwantung... lbs.	54,024	2,756	25,826	1,886	3,712,102	125,928	1,761,228	100,539
Philippine Islands ..... lbs.	506,313	16,606	614,581	21,379	6,365,373	226,304	4,480,072	158,059
Other countries ..... lbs.	85,075	3,585	79,464	3,006	1,349,723	60,262	653,696	28,729
Book paper, not coated ..... lbs.	3,159,680	219,296	2,648,100	172,957	25,485,215	1,801,550	24,173,000	1,628,722
Exports to:								
Europe ..... lbs.	146,654	21,842	345,794	24,834	1,303,445	116,875	803,000	67,097
Canada ..... lbs.	952,309	53,897	1,123,140	60,316	8,083,362	486,567	7,430,553	451,650
Mexico ..... lbs.	48,130	4,161	46,035	4,949	393,158	39,675	490,780	53,010
Cuba ..... lbs.	578,490	37,479	211,471	14,469	3,433,739	242,408	2,957,782	202,663
Argentina ..... lbs.	30,404	2,757	99,371	9,079	1,453,656	114,884	1,128,282	83,900
Other South America ..... lbs.	66,760	5,360	108,908	8,258	948,725	78,637	1,344,723	103,670
China, Hong Kong, and Kwantung... lbs.	747,247	44,834	17,021	2,232	4,901,716	295,897	4,540,568	280,526
Philippine Islands ..... lbs.	338,067	22,088	306,942	19,241	2,955,678	202,870	2,756,195	177,972
Australia ..... lbs.	82,177	13,855	212,448	16,133	908,541	129,650	775,783	59,707
Other countries ..... lbs.	169,442	13,023	176,970	13,446	1,103,195	94,087	1,945,334	148,527
Cover paper ..... lbs.	163,147	29,624	166,473	23,409	1,341,678	231,997	1,573,373	248,329
Greaseproof and waterproof paper ..... lbs.	270,923	53,011	329,747	75,512	1,960,637	363,066	2,391,867	473,694
Overissue and old newspapers ..... lbs.	11,136,555	119,818	14,655,564	101,007	98,118,639	1,090,048	110,390,977	908,793
Wrapping paper ..... lbs.	3,260,825	216,938	3,395,746	215,826	28,128,377	1,940,398	30,892,304	1,942,563
Surface-coated paper ..... lbs.	745,213	80,296	668,355	73,469	11,179,699	1,031,971	6,293,409	695,157
Tissue and crepe paper ..... lbs.	501,306	114,653	418,717	83,703	3,066,432	687,831	3,371,927	652,373
Toilet paper ..... lbs.	355,436	41,347	533,090	62,105	4,703,639	531,149	4,998,341	547,292
Paper towels and napkins ..... lbs.	284,096	38,755	309,590	39,330	2,257,052	280,047	2,807,878	317,498
Boxboard of paperboard and strawboard .... lbs.	4,619,496	128,827	4,838,840	117,730	37,682,774	1,007,140	46,386,687	1,139,810
Bristols and bristol board ..... lbs.	193,777	19,622	159,277	16,343	1,974,317	196,016	1,568,949	146,550
Other paper board ..... lbs.	4,111,756	178,661	2,187,018	107,659	28,643,653	1,344,184	24,709,047	1,184,552
Sheathing and building paper ..... lbs.	2,160,695	63,127	2,613,895	80,207	16,026,905	539,605	14,329,472	488,207
Fiber insulating lath or board ..... sq. ft.	4,208,113	140,559	4,801,006	152,500	17,509,226	584,629	44,445,673	1,413,705
Wall board of paper or pulp ..... sq. ft.	5,330,393	173,774	2,346.496	77,171	44,644,960	1,448,366	20,397,477	672,897
Blotting paper ..... lbs.	256,327	33,722	231,953	36,016	2,468,350	293,290	2,188,016	269,492
Filing folders, index cards, and other office forms ..... lbs.	100,029	40,657	153,261	43,780	1,049,106	392,677	1,097,234	409,283
Papeteries (fancy writing paper) ..... lbs.	94,832	25.961			465,795	126,128	406,267	91,963
Other writing paper ..... lbs.	2,211,769	228,852	1,645,252	159,578	19,343,611	2,039,072	15,203,934	1,502,734
Paper hangings (wall paper) ..... rolls	.....	23,025	118,251	24,508	.....	451,394	2,278,200	358,629
Paper bags ..... lbs.	916,633	74,411	1,185,213	83,269	7,915,660	671,909	6,933,674	565,857
Boxes and cartons ..... lbs.	2,238,080	160,674	1,809,001	115,395	20,231,083	1,316,142	16,986,709	973,894
Envelopes ..... lbs.	777,570	33,116	179,919	27,066	1,627,880	283,236	1,556,825	252,639
Vulcanized fiber sheets, strips, rods, and tubes ..... lbs.	506,190	117,720	394,739	105,052	4,238,011	1,038,899	3,234,631	803,539
Cash-register and adding-machine paper ..... lbs.	188,605	22,223	159,346	16,527	3,172,591	318,303	3,490,892	314,120
Other paper and paper products	.....	438,854	.....	369,046	.....	4,044,073	.....	2,976,854
WOOD PULP AND PAPER STOCK								
Sulphite wood pulp ..... tons	2,906	176,968	1,573	98,033	29,054	1,550,439	20,262	1,124,590
Soda wood pulp ..... tons	178	15,205	70	5,702	1,221	98,856	1,604	124,969
Other wood pulp ..... tons	588	42,465	1,169	11,219	4,838	333,590	7,365	230,131
Rags and other paper stock ..... lbs.	11,095,974	159,483	4,399,216	49,284	77,958,414	1,406,290	42,445,626	611,385
PAPER AND PULP MILL MACHINERY								
Paper and pulp mill machinery	.....	645,600	.....	399,777	.....	2,547.303	.....	2,342,964

Holliday Traces Zellerbach History

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., October 26, 1930.—At an enthusiastic gathering of the Chamber of Commerce this week the principal address was delivered by Leon C. Holliday, superintendent of the National Paper Products Company, who dwelt on conditions in the paper making industry. He traced the history of the Zellerbach interests in the Crown-Zellerbach Company which now has the local plant under its control. He said that in 1860 Arthur Zellerbach was employed as a travelling man in the East but after having his ups and downs decided to join his brother in a financial institution in San Francisco. "The venture terminated in 1868," he said, "when a disagreement developed and Arthur Zellerbach found himself stranded in that big city with a family on his hands and no immediate means of supplying them with the necessities of life. It was then that he decided to embark in the paper business. He started out on a small scale with a pushcart and collected paper around town and disposed of it at a profit. Although the business prospered slowly it was only a short time before he leased a basement owned by a large retailing concern and in that place was laid the foundation for the development of a great industry.

"In 1890 he had managed to accumulate enough capital to form a partnership with his two sons. One of these youths, who is now president of the company, injected new life and progressiveness in the business and was largely instrumental for its steady expansion. From that time the future of the company was assured and in 1906 the Union Paper Company was taken over. In the great San Francisco earthquake that firm suffered considerable losses but in no manner was it crippled permanently. About 1910 the company began to convert the paper themselves and this process inaugurated the conversion of paper into roll towels. From that date the company steadily rose to its present high standing in the commercial world and today it maintains branch offices in the principal cities of the East and West. When the Zellerbach firm pooled their interests with the Crown Paper Company in the West it was then that much in the way of added expansion occurred."



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We design and build barking drums, sulphite digesters, experimental digesters, globe rotary digesters, cylindrical digesters, rotary lime kilns, incinerators, disc evaporators, air nozzles, diffuser tanks and swing pipes, bleach and clay mixers, rod mills, Moore speed-cranes, shovels, draglines and trenchoes.

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ESTABLISHED 1872

Published at 34 North Crystal St., East Stroudsburg, Pa. Executive and Editorial Offices, 10 East 39th St., New York, N. Y.

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Price, Per Copy, 10 Cents — United States, Per Annum, $4.00
Canada and Foreign Countries in Postal Union, $6.00

Member Audit Bureau of Circulations

Vol. XCI New York, November 6, 1930 No. 19

LOCKWOOD'S DIRECTORY OUT

The new edition of Lockwood's Directory of the Paper and Allied Trades was issued the latter part of last month. This is the fifty-sixth annual edition of this work, the first edition having appeared in 1873.

The mill section this year, as usual, reflects the rapidly changing conditions in the industry. Only about the usual number of new mills have been added, but the changes in other respects have been very numerous.

The idle mills have again shown a considerable increase, being about 10 per cent greater than last year. In spite, however, of the severe depression in most industries, the list contains the names of no representative mills, showing that these mills have undoubtedly been forced to close simply because of the establishment in the past few years of the numerous large and finely equipped mills and the constant and thorough modernization of many going plants. Pulp and paper manufacturers are obviously growing increasingly alive to the fact that they can meet present day competition only by discarding obsolete machinery and replacing it with the more up to date and efficient types.

The mortality among the pulp mills has again been severe, considerably exceeding last year's record when the number was unusually large. It has been necessary to designate as idle this year or to obliterate from the Directory altogether twenty-four pulp mills of all varieties. Of this number 75 per cent were ground wood mills, 12½ per cent were sulphite mills and 12½ per cent were soda pulp mills. No sulphate pulp mills went idle during the past year.

Unfortunately it has not been possible to obtain the official figures of the present census for all of the cities and towns represented in the Directory in time to print them in this edition. In the interest of uniformity, therefore, the old figures have been retained and no changes made. These changes will, of course, be made in next year's edition of the Directory when the accurate and complete figures for all of the sections in the Directory are available.

More than the ordinary number of changes have taken place in the trades allied with the pulp and paper industry. It has been endeavored carefully to ascertain all of these changes. It may, therefore, reasonably be expected that all of the sections in addition to the mill section are as accurate and complete as it is humanly possibly to make them, including the Classified List of Pulp and Paper Mill Products, the Paper Specialties Section, Glazed Coated Paper and Board Manufacturers, Rag and Paper Stock Dealers, Rags and Paper Stock Consumed by the Mills, General Paper Merchants, Paper Box Manufacturers, Paper Bag Manufacturers, Envelope Manufacturers, Papeterie Manufacturers, Pulp Testing Chemists, Office Addresses of Mills and Mill Supply Houses, Wholesale and Retail Stationers, Trade Associations and Watermarks and Brands.

The Directory is issued in two editions ,the Regular edition of more than 1000 pages and the Travelers' edition of approximately 250 pages. The latter contains only the mill information and measures 5 x 8 inches. It is attractively bound in a flexible cover. This edition in general is designed to be as compact and convenient as possible to meet the special needs of traveling men. Only a limited number of this edition is issued. The cost of each edition is $7.50 or $7.00 cash with order. Orders should be sent to the Lockwood Trade Journal Company, 10 East 39th Street, New York.

SCANDINAVIAN PULP EXPORTS LOWER

Exports of pulp and paper from Sweden during the first eight months of the current year were generally lower than during the corresponding period in 1929, groundwood shipments having fallen off by about 7 per cent, unbleached sulphite by 13 per cent and unbleached sulphate by 23 per cent, while shipments of news print and packing papers declined by 10 per cent according to information in the hands of the Department of Commerce.

Exports of bleached sulphite have been on about a level with those of last year, Swedish exports up to August 31 comprised 279,098 tons of wet ground wood, 30,098 tons of dry ground wood, 86,633 tons of bleached sulphite, 407,908 tons of unbleached sulphite, 217,662 tons of unbleached sulphate, 114,056 tons of news print paper, 132,695 tons of packing papers, and 38,147 tons of other papers, including 27,960 tons of boards.

Excepting for ground wood, shipments of which increased by 25 per cent during the first eight months of this year compared with the same period last year, Norwegian pulp and paper exports have been generally lower.

Exports of bleached sulphites also increased by 12 per cent, but this was insufficient to offset a decrease of 24 per cent in unbleached sulphites and 10 per cent in unbleached sulphate pulp. News print exports during this period were about on a level with last year, but paper shipments as a whole have declined by about 5 per cent. Norwegian shipments up to the end of August comprised 480,685 tons of mechanical ground wood, 95,871 tons of un-

bleached and 59,057 tons of bleached sulphite pulp, 14,572 tons of sulphate pulp, 111,723 tons of news print, and 87,881 tons of other classes of paper.

Exports of pulp and paper from Finland during the first eight months of the current year were generally above those of the corresponding period in 1929, shipments of mechanical ground wood having risen from 98,117 tons to 99,334 tons, sulphite pulp from 231,031 tons to 237,305 tons, sulphate pulp from 73,847 tons to 75,565 tons, and news print from 110,702 tons to 124,465 tons.

Act to Foreclose Oswegatchie Mortgage

GOUVERNEUR, N. Y., November 3, 1930.—An action to foreclose the mortgage on the property of the Oswegatchie Paper Company was started this week by the Watertown National Bank, through its attorneys. The foreclosure is for the purpose of satisfying a first lien upon the property amounting to about $40,000 which was advanced by the bank as trustee in settling claims for taxes, insurance, interest, etc. It is also being made for the purpose of financially satisfying the holders of $598,000 of first mortgage bonds and $899,300 of first and refunding mortgage bonds which practically amount to a second mortgage on the property. The bank is the mortgage trustee and is being represented by the firm of Cobb, Cosgrove, Harer & Wright in the proceedings.

In 1927 the paper company raised an issue of $1,500,000 of first and refunding mortgage bonds for the purpose of taking up $900,000 in first mortgage bonds and to leave a surplus for working capital. Holders of but $300,000 of the first mortgage bonds surrendered them for first and refunding mortgage bonds. The mills owned by the company are modern in every respect and were acquired from the owners of the Aldrich Paper Company in 1923. The sale included valuable water power rights, a tract of land and extensive timber holdings. The Aldrich Paper Company had suffered fire loss when its plant at Natural Dam was destroyed a few years before that time and the new owners of the site raised an issue of $900,000 in bonds secured by a first mortgage to provide for the construction and equipment of the new mill. The equipment in the plant was installed by the Bagley & Sewell Company. The ground wood mill of the company is located in the village of Emeryville. Both plants are located on the Oswegatchie river near Gouverneur with water power development estimated at about 5,500 horse power while the timberlands comprise about 20,000 acres. The timber holdings are situated in Lewis, Herkimer and St. Lawrence counties and are valued at about $3,000,000.

The organizers of the Oswegatchie Paper Company were formerly the owners of the Carthage plant of the West End Paper Company, which was disposed of to the National Paper Products Company a few months ago. Samuel B. Wardwell is president and general manager of the company. Large holdings of the bonds of the defunct concern are now in the hands of Nelson R. Caswell, of Gouverneur, and Attorney Samuel Child, of Watertown. It was stated that after judgment of foreclosure is rendered a date will be set aside for the disposition of the property by auction to the highest bidders and the proceeds will be used to pay the expense of litigation, satisfy the lien held by the plaintiff bank to meet claims of the bondholders.

Rice Straw Mill To Start in March

The Pacific Coast Pulp and Paper Corporation now plans to have its new mill at Richvale, Cal., in operation by March of this year, using rice straw. The new plant is about 18 miles from Richvale and consists of a group of five buildings, construction of which will cost about $117,500 with machinery costing $150,000.

Officers of this company are: President, D. M. Thompson, Santa Monica, Cal.; vice-President, Peter Swan and general manager, C. A. Kieren, both of Portland, Ore., treasurer, A. J. Lofgren, Richvale.

Fast-Growing Pines Recommended

Growing new timber is the only way to keep the pine industry of the South from "going back," say R. D. Forbes and Donald Bruce of the Forest Service, in Circular 124-C just issued by the U. S. Department of Agriculture on the rate of growth in second-growth southern pines. Proper care of second growth and plantings alone will maintain the present income of $524,000,000 a year from a business that employs 20 per cent of all the industrial labor of the Southern States, they say.

The circular gives information on making cut-over lands produce, and on how much various types of trees on proper soils may be expected to yield when cared for and protected from fire. With tables of yields in cords and board feet, together with data on methods of management, the publication is practically a crop manual for farmers with cut-over lands and woodlands and for lumbermen planning ways and means to employ forest holdings to better advantage.

Obstacles for southern timber growers to overcome are fire, excess or uncertain taxation, competition with virgin timber stands (rapidly passing), and lack of information on the growth of young trees under proper condition, the circular says. Fire-protection funds are already available in many States. Taxes are a difficult problem, some counties having taxed much of their standing timber, even to the seed trees, out of existence. Two Southern States, Louisiana and Alabama, have come forward with a taxation method which takes into consideration the number of years required to produce a forest crop.

Southern pines are notably fast-growing. With the advance of sound forestry information in recent years, many landowners already are protecting their timber and woodlands from fire and consequently getting crops of timber and turpentine from lands formerly unproductive. The most immediate use for 102,000,000 acres of cut-over land—nearly half of the original southern "piney woods"—is production of timber from natural second growth or by systematic planting. Stocking to the kind of pine originally found on the land is recommended.

For every billion feet of decline in lumber production, it is estimated that 18,000 men are thrown out of employment in the South, and whole communities may be affected. Second growth, protected timber, "appears capable of filling every demand of the future for forest products."

Knowledge of rate of growth is important in demonstrating the practicability of applied forestry in the southern pine belts, it is said.

While the supply lasts, Circular 124-C, Rate of Growth of Second-Growth Southern Pines in Full Stands, may be obtained free from the Office of Information, U. S. Department of Agriculture, Washington, D. C.

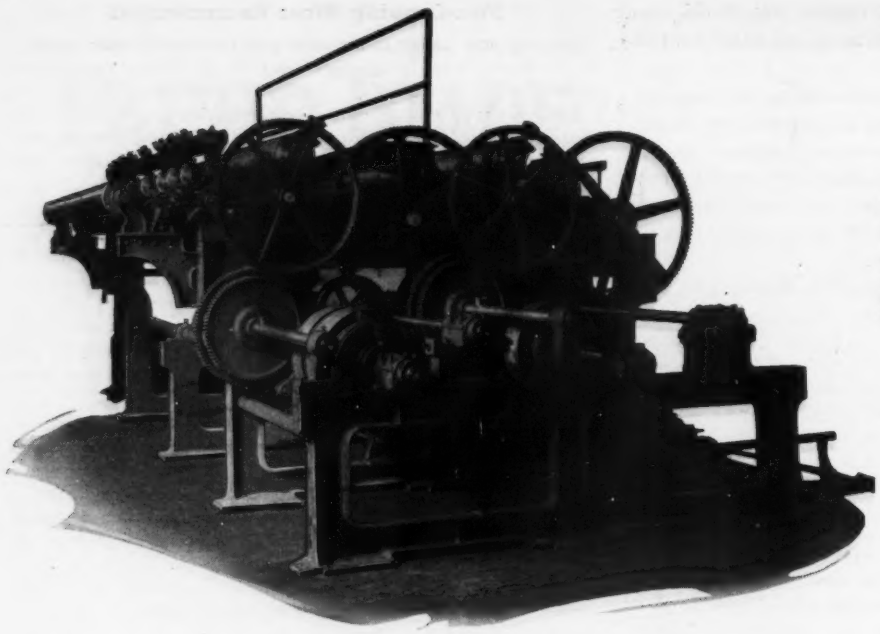
Senior Technologist Wanted

The United States Civil Service Commission announces open competitive examinations for the position of senior technologist in cellulose to conduct investigations on the utilization of cornstalks, cottonstalks, rice hulls and similar by-products in the laboratory and in cooperation with industrial firms, individuals or organizations.

The salary will be from $4,600 to $5,400 a year. Competitors will not be required to report for examination at any place, but will be rated on the following subjects, (1) education, training and experience 70 weights and (2) publication or thesis (to be filed with application) 30 weights.

The candidate must be a graduate with a bachelor's degree from a college or university of recognized standing, with the completion of at least 118 semester credit hours, such a course to have included the fundamentals of chemistry, mathematics, and engineering or physics.

Applicants should file form 2600 and 274 not later than November 19, 1930.



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Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

General Analysis of Black Liquor

By Francis J. Cirves[1]

The analysis of black liquor offers difficulties which are not encountered in white or green liquors, due to the abundance of organic matter and coloring agents present.

The methods outlined here have been employed in an investigation of sulphate waste liquor. Most of the methods employed are standard or modified to procure the most favorable results. Determinations 6 to 11 and 17 to 24 inclusive are further analytical adaptations which have been found to greatly facilitate the work of resolving the black liquor into its constituents. While titrations may be gone about in the ordinary way, it has been found that a much greater accuracy could be had in this work by the use of a porcelain stirring rod and a breaker instead of a flask.

Where calculations have not been made directly to grams per liter of the original substance NaOH equivalents have been made in order to obtain comparable differences. The application of a conversion factor changes the equivalent to the actual amounts present.

1. Partial Alkalinity

The partial alkalinity, namely, the NaOH, ½ Na_2S, and ½ Na_2CO_3 value is determined by titrating a 10 cc aliquot diluted with 100 cc of distilled water with standard HCl, using phenolphthalein as indicator. A sufficient amount of the original solution is made up for subsequent determinations, namely, by dissolving 100 cc of black liquor with distilled water and filled to mark of a ½ liter volumetric flask.

20 × cc × N/2 (HCl) = partial alkalinity

If the Na_2SiO_3 equivalent is known it may be subtracted from the above result for better accuracy, although in most work it may be neglected since it is equal to about 1.0.

2. Total Alkalinity

A similar aliquot titrated with standard HCl using methyl orange as indicator gives an estimate of the alkalinity caused by the NaOH, Na_2S, Na_2CO_3, ½ Na_2SO_3, Na_2SiO_3, sodium oleate, sodium resins, sodium tannin and sodium lignin constituents.

20 × cc × N/2 (HCl) = total alkalinity

3. Active Alkalinity

The active alkalinity caused by NaOH and ½ Na_2S is obtained by precipitating a 100 cc sample of black liquor with 200 cc 20 percent $BaCl_2$ solution and diluting with distilled water to the mark of a ½ liter volumetric flask. A 50 cc aliquot of the supernatant liquid or filtrate is titrated with standard HCl using phenolphthalein as indicator.

4 × cc × N/2 (HCl) = active alkalinity

4. Sodium Carbonate

2 × (partial alkalinity) − (active alkalinity) = Na_2CO_3 equivalent.

5. Total Iodine Value

To determine the total iodine value caused by the Na_2S, Na_2SO_3 and $Na_2S_2O_3$ titrate a 25 cc sample of liquor prepared for (1) diluted with 100 cc distilled water and acidified with acetic acid with standard iodine solution using a starch solution as indicator.

8 × cc × N/10 = total iodine equivalent

6. Partial Iodine Value

To determine the Na_2S and $Na_2S_2O_3$ present titrate a 25 cc aliquot of the liquor prepared for (3) with standard iodine solution using starch solution as indicator.

8 × cc × N/10 iodine = partial iodine equivalent

7. Sodium Sulphite

(Total iodine value) − (partial iodine value) = Na_2SO_3 equivalent

8. Sodium Thiosulphite

A 100 cc aliquot of liquor prepared for 3 is treated with 25 cc 5 percent $ZnCl_2$ solution to precipitate the Na_2S. A 25 cc aliquot of the filtrate is acidified with acetic acid and titrated with standard iodine solution.

10 × cc × N/10 iodine = thiosulphate equivalent

9. Sodium Sulphide

(Partial iodine value) − (sodium thiosulphate) = Na_2S equivalent

10. Sodium Hydroxide

(Active alkalinity) − ½ (sodium sulphide) = NaOH grams per liter

The following procedure will obtain total solids, organic matter, ash, alkalinity of ash, NaCl and the silica content.

11. Total Solids

A 25 cc sample of black liquor is pipetted into a tared platinum evaporating dish and evaporated to dryness.

40 × weight of residue = Total solids grams per liter

12. Ash

The residue in the platinum dish is subjected to a red heat until all carbonaceous matter has been driven off.

40 × weight of ash = ash grams per liter

13. Combustible Organic Matter

(Total solids) − (ash) = Organic matter grams per liter

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14. Alkalinity of Ash

The ash in the platinum dish is dissolved with 25 cc distilled water and titrated directly with standard acid.

1.6 × cc × N/10 (H_2SO_4) = Alkaline equivalent of ash

15. Sodium Chloride

Neutralize the ash which has been titrated in (13) with a pinch of Na_2CO_3 and titrate with standard $AgNO_3$ solution using $K_2Cr_2O_7$ solution as an indicator.

2.34 × cc × N/10 ($AgNO_3$) = NaCl grams per liter

If the NaCl content is not to be determined in the ash, a volumetric method would be more rapid, as follows:

A 50 cc sample of liquor is pipetted into 100 cc distilled water to which is added 100 cc 5 percent HNO_3. A 50 cc aliquot of the supernatant liquid or filtrate is boiled to entirely expel the H_2S. After cooling it is neutralized with Na_2CO_3 and titrated with standard $AgNO_3$ solution.

4 × cc × N/10 $AgNO_3$ = NaCl equivalent

16. Silica

A duplicate sample of ash of (12) is treated with a few cc of conc. HCl evaporated nearly to dryness diluted with 25 cc distilled water and the residue filtered and ignited in a tared crucible.

53.1 × weight of residue = Na_2SiO_3 equivalent

17. Fats, Resins and Lignins

A 10 cc aliquot of (1) is diluted with 300 cc distilled water and acidified with 25 cc dilute H_2SO_4. Five of such samples are allowed to stand until the lignin has settled to the bottom. Each of these are filtered in a tared Gooch crucible. The one representing the total content is filtered to dryness and oven dried and weighed.

1000 × weight of residue = fats, resins and lignins, grams per liter

18. Oxyacids, Saccharides and Lactones

(Combustible organic matter) — (fats resins and lignins) = oxyacids, saccharides and lactones (grams per liter)

19. Fatty Acids

When the contents in the filtering crucible are still immersed in water, fill with ether and cover with a watch glass. Extract two more times with ether 20 cc portions. Excessive extraction is not recommended since only the readily soluble glycerides are desired.

(Fats, resins and lignin) — 1000 × weight of residue = fatty acids (grams per liter)

20. Resins

The same procedure is carried out with a third sample but an extracting solution of ether strongly acidified with acetic red to methyl orange is used.

(Fatty acids) — 1000 × weight of residue = resin grams per liter

21. Alcohol Soluble Lignin

The same procedure is employed using ordinary alcohol as extracting agent. The alcoholic filtrates should be refiltered if a precipitate appears in the filtrate for at first a form of lignin is soluble and then becomes distinctly insoluble.

(Resins) — 1000 × weight of residue = alcohol soluble lignin

22. Hot Soluble Lignin

The same procedure is employed using hot glacial acetic or boiling alcohol. Several extractions are necessary.

(Alcohol soluble lignin) — 1000 × weight of residue = hot soluble lignin

23. Insoluble Lignin

The residue of (22) is the insoluble form of lignin.

1000 × weight of residue = insoluble lignin

24. Total Lignins

(Fats, resins and lignins) — [(fatty acids) + (resins)] = total lignins (grams per liter)

An analysis of a sample of sulphate liquor is shown in the following table:

Constituent	NaOH equivalent	Conversion factor	Actual amounts in black liquor (grams per liter)
NaOH	1.43	1.0	1.43
Na_2S	3.09	0.975	3.01
Na_2CO_3	10.54	1.40	14.78
Na_2SO_3	4.20(½)	1.577	6.64
Na_2SiO_3	1.00	1.523	1.52
Total alkalinity of salts	18.16		
$Na_2S_2O_3$	1.51	1.977	3.98
Na_2SO_4			14.70
NaCl			0.88
		Totals	46.94
Be 20½, 22 deg. C. Fatty acids	2.10		
Resins	4.90		
Lignins	49.00		
Balance as oxyacids, saccharides and lactones	36.49		
Total organic matter (grams per liter)	92.49		
Total alkalinity of black liquor		32.68	
Total alkalinity of salts (above)		18.16	
Difference = alkalinity of organic compounds		14.52	As Na_2CO_3 20.30

An Investigation of Sulphate Waste Liquor

By Frances J. Cinves[1]

The Acid Precipitation of Organic Matter in Sulphate Liquor

When waste sulphate liquor, or "black liquor," is acidified with dilute sulphuric acid, a voluminous chocolate brown precipitate is formed which represents approximately 30 per cent by volume and 10 per cent by weight of the total. It consists principally of ligneous matter and some fats and resins.

The fats and resins are obtained by extraction with ether and subsequently by alcoholic and acetic acid treatment of the lignin. Upon evaporation of the entire extraction, a pale yellow, oily supernatant liquid is obtained, resembling oleic acid in all respects. It is odorless, tasteless and has a specific gravity of less than unity. The pitchy substance remaining below resembles rosin or resinous matter. The amounts actually recovered were approximately 2.5 grams of fatty acid or glyceride and 4.5 grams of resin per liter.

After the ether extraction, the ligneous matter was treated with cold alcohol and a considerable quantity was found soluble and was obtained, upon evaporation, as a brown, amorphous powder. This form of Lignin I was readily soluble in caustic solutions and ammonia. Upon reprecipitation from a caustic solution by means of dilute sulphuric acid, a strong humus odor was apparent. This changed upon second reprecipitation and markedly upon subsequent reprecipitations to a vanillin odor. This was not characteristic of Lignin III and only inappreciably in Lignin II.

The portion of the ligneous matter not soluble in cold alcohol was treated with boiling glacial acetic acid, the major part of it going into solution. Upon slight cooling, the lignin exhibited great adhesive properties and could not be mechanically removed from the evaporating dish. It had a lustrous reddish brown color and behaved much like a gum or resin, since it was soluble both in boiling glacial acetic acid and boiling alcohol, and having a melting point in a region of its solubility.

Lignin III, the remaining form insoluble in the aforementioned

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liquids, was also insoluble in strong caustic solutions and ammonia, although readily soluble in very dilute caustic soda solution. G. Lange[2] considered the insoluble form identical to the soluble since on dissolving in alkali and reciprocation in acid, it became soluble. This was not confirmed. Lignin III remained insoluble even in boiling alcohol.

All three forms of lignin were soluble in acetone in the order enumerated, the last having a much less affinity and had a tendency to become doughy instead.

Analysis and Comparison of Mosinee Waste Liquor

An analysis of the Mosinee sulphate waste liquor, as well as of the pulp obtained, will enable one to determine what becomes of the original constitutents of the wood and will also enable a comparison to be made with that of other processes.

Table I shows these constituents. Although the values may vary somewhat in Column 1 the value of 30 per cent for lignin is correct for the coniferous woods used, namely, hemlock, balsam, and jack pine. Column 2 shows the analysis of the pulp obtained. Column 3 is the percentage yield of paper based on actual operation. The remainder of the wood constituents would be found in the black liquor and are shown in column 4. On a 100 per cent basis, the relative amounts existing in the black liquor are shown in column 5. Thus it is seen that 47 per cent of the total organic solids is lignin. Since 86.65 grams were actually found in the analysis, as indicated in column 6, the total organic solids must be as shown, 182.84 grams per liter. Even if in the original wood the cellulose content varied, *i.e.*, up to 55 per cent, the calculation would not be effected because the actual yield of 38.5 per cent would put the remainder as dissolved cellulose to make up the balance with hemicelluloses. These cellulose forms exist in the black liquor as oxyacids, pentose and hexose sugars, as well as the lactonic acids.

TABLE I

Constituent	Per cent of dry wood	Per cent of dry pulp	Per cent yield	Per cent remaining in black liquor	Per cent of black liquor	Grams per liter black liquor
Cellulose	50.0	94.8	38.5	11.5	19.4	35.8
Hemicellulose	16.0	...	...	16.0	26.9	49.5
Lignin	30.0	5.2	2.1	27.9	47.8	86.65
Fats and resins	4.0	...	...	4.0	5.9	10.89
	100.0	100.0	40.6	59.4	100.0	182.84
Organic combustible found						160.83
Volatiles lost in vapors						22.01

Since 160.83 grams per liter of combustible or organic matter were found in the total solids, 22.01 grams per liter, as approximately 12 per cent, must be accounted for as lost in relieving the digesters in the form of oils, terpenes and sulpho-methyl gases.

Table II represents an analysis of Mosinee sulphate liquor.

The soda and sulphate processes produce liquors both lower in fat and resin content, probably due to the use of dry wood, whereas, in the Mosinee process practically green wood was used.

The lignin constitutent is identical in all three instances, namely, 54.0 per cent.

The oxyacids and lactones of both foreign processes are 6 to 8 per cent lower, but the difference can be directly accounted for the comparatively higher acetic and formic acid values. The Mosinee waste liquor contains but a trace of acetic acid and very little formic acid. Aside from the customary small percent of acetic acid formed, due to the decomposition of the lignin into its simpler forms, greater amounts are to be accounted for by the hydrolysis and breaking down of the lactonic acids which may go over entirely as such in severe instances.

Humic acids were not found or included in the analysis of Mosinee sulphate liquor. Lignins I and II are soluble in alcohol or acetic acid and lignin III is insoluble in dilute acids, which cannot be applied to humic acid. Moreover, the three forms of lignin were also obtained by humic acid. It should be found in the filtrate when strongly acidified or be obtained by a salting out process; neither was the case. A resinous precipitate was obtained instead which was soluble in ether and alcohol and was the fat and resin constituent of the liquor.

This clearly shows that although lignin humifies rapidly above 37 deg. C. in the air,[3a] the conditions are not conductive to such formation in the Mosinee sulphate process. Rather a decomposition takes place, limited in general to that of the first order. This is also well born out by the low acetic content, a simpler product of organic decomposition.

TABLE II
MOSINEE SULPHATE PROCESS (CONIFEROUS WOOD)

Sulphate liquor constituents	Grams per liter	Per cent
Fats and resins	10.89	6.7
Lignin I	54.40	53.9
Lignin II	23.25	
Lignin III	9.00	
Oxyacids, saccharines and lactonic acids	63.29	39.4
Acetic acid	trace	...
Total	160.83	100.0

Tables III and IV show analyses of two foreign processes and furnish good comparisons with the Mosinee sulphate process.

TABLE III
SODA PROCESS, PINE WOOD[3]

Soda liquor constituents	Grams per liter	Per cent
Fats and resins	.75	1.3
Humus and humic substances	31.0	53.7
Soluble humic acid oxyacids and lactones	20.0	34.6
Acetic acid	3.0	5.2
Formic acid	3.0	5.2

TABLE IV
SULPHATE PROCESS, CONIFEROUS WOOD[4]

Sulphate liquor constituents	Per cent
Resin and fatty acids	2.47
Lignin	54.29
Oxyacids and lactones	30.34
Acetic acid	5.16
Formic acid	3.69

Characterization of the Sulphate Lignins

Approximate molecular weight determinations were made based on the combining weight with sodium hydroxide and a calculation is made on both one atom or two sodium atoms per molecule of lignin.

Form	Molecular weight 1—Na/Mol.	2—Na/Mol.
Lignin I	862	431
Lignin II	536	268
Lignin III	(117)	

Lignin III is unique in its low value. Its combination with sodium hydroxide may be an adsorption phenomena rather than the formation of a chemical compound of sodium lignate, since it is insoluble in 17.5 per cent caustic soda solution, but more so upon excessive dilution with water, which is conductive to hydration and molecular adsorption of NaOH. Since it is also soluble in ammonia it is doubtful if an alkaline compound can be formed of lignin III.

The Yield and Recovery Value of Black Liquor

Table IV shows the yield of the various constitutents based on 50 cooks per 24-hour day. Although authorities[4] claim that 2,000 gallons of black liquor are obtained per ton of paper, the present calculation is a conservative one-half, being based on the white liquor employed and the moisture content of wood employed in a single cook. At 2,000 gallons per cook, 100,000 gallons, or 378,000 liters, are produced a day.

TABLE V
BLACK LIQUOR

Constituents	Grams per liter	Yield per 24 hour day Pounds per 100,000 gallons
Fats	3.15	2,620
Resins	7.74	6,440
Lignin I	54.40	45,200
Lignin II	23.25	19,340
Lignin III	9.00	7,500
Total	97.54	81,100

At present there is no real demand for any of the substances obtainable from black liquor as such. The fats and resins might be sold and have a technical value of a few cents a pound, which would hardly bear the expense of reclaiming. If it were possible to dispose of the entire constituents of Table V for technical use at two cents a pound, at a 50 per cent margin it would amount to about $800.00. Using coal for fuel to recover the valuable alkali would reduce it to approximately one half on a basis of three-quarter B.t.u. value of lignin to coal.

Many economic uses for waste liquor have been suggested and employed. Some of them are as follows:[6] Binding agents for briquetting, coal, peat and turf; tannin extracts, mordants and fillers for leather industries; dyes, paper sizing and coating; moulding agents for sawdust, waste metal and road material, fire extinguishers, adhesives, finishing and varnishing compounds, ceramic pastes, egg preservatives and alcohol. None of these are especially important at present.

A much more favorable proposal for the utilization of waste liquors would be the preparation of highly desired chemical compounds by means of special and developed processes on the isolated lignin. Lignin, unlike coal, is made up of, aromatic nuclei and, hence, may lend itself to the production of substances simply and more directly obtainable than is otherwise accomplished. Coal tar, originally consisting of straight chain compounds, is converted to aromatic or benzene ring formations by cracking and distillation. Numerous processes, such as condensation, reduction, chlorination, oxidation, etc., as well as catalytic methods, are required in order to synthesize the various compounds which even duplicate those of nature. The work is really very remarkable and profitable considering the fact that coal tar too was once only used as fuel below the boilers.

Even azo dyes,[7] a coal tar product, have been prepared from lignin of shades varying from bright red to a brown. Other dyes are lignone,[8] which imparts to wool, an orange-yellow color; ligno-cyanine,[9] which dyes silks and mordanted cotton a brownish violet.

Nitro lignin is an orange colored product.[10] Lignin on distallation with zinc dust yields 17 per cent viscous oil.[11] Under slight pressure, an aromatic tetra phenyl compound $(C_6H_5)_4$ was produced and confirmed.[12]

Lignin dissolved in dilute Na_2CO_3 and oxidized by air under pressure at 200 deg. C. produced 8.28 per cent aliphatic compounds, 3.12 per cent benzene, carboxylic acids, phthalic and mellitic derivatives and other aromatic formations.[13]

Fusion of lignin gave protocatechuic acid which is an intermediate compound to the formation of oxalic acid. In an atmosphere of hydrogen, a 28 per cent yield of protocatechuic acid was obtained, which may be increased by the use of a catalyst.[13]

Guaiacol, an ester of protocatechuic acid, is found naturally in tropical trees as a greenish resin, its melting point being[14] 85-90 deg. C. Lignin II had every resemblance of a gum with a melting point in the same region. Undoubtedly these properties are due to similar chemical derivation.

Catechol is obtained by fusion with caustic potash in a non-oxidizing atmosphere. The yield was raised from 9 to 23 per cent by the aid of a catalyst.[15]

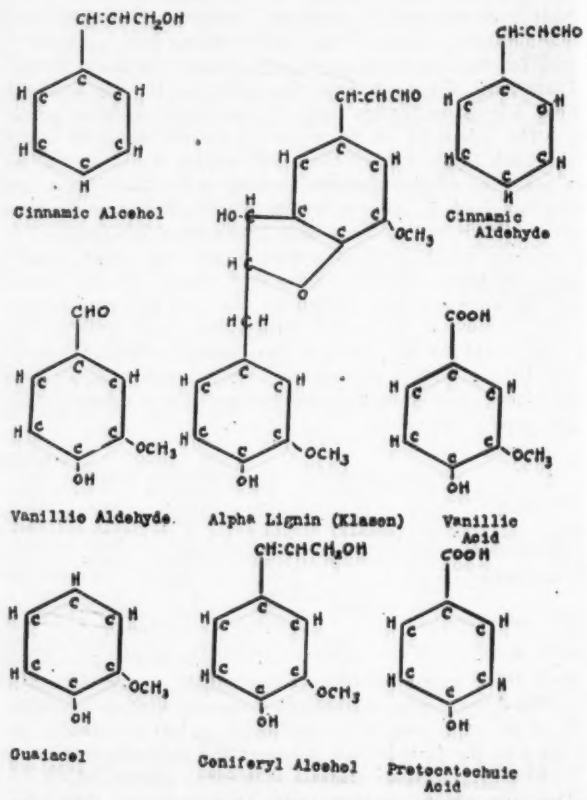
The basis of the three last mentioned compounds is coniferyl alcohol $C_6H_3OH.OCH_3C_3H_4OH$ (4, 3, 1) a hydrolized form of coniferin which is found in the cambium sap of coniferous trees. Guaiacol, protocatechuin and cresols appear to be the skeleton structures[16] of lignin. Klason deduced a formula for alpha lignin on this basis. Later alpha lignin was synthesized in the hemiform from vanillin and alpha and beta lignin from coniferyl alcohol.

A more familiar compound, vanillin, $C_6H_3CHO.OCH_3OH$ (1, 3, 4), a form of vanilla, was prepared in pure crystaline form by fusion of dried waste liquor with lime.[17] It is technically used in the manufacture of perfumes and confections. Vanilla used for flavoring consists principally of vanillic acid, $C_6H_3COOH.OCH_3OH$ (1, 3, 4), 2-2.75 per cent vanillin, 4 per cent resin and 10 per cent sugar.[18] It is extracted from the vanilla pod and also occurs naturally in asparagus, beet sugar and certain balsams. Not enough is obtained in this manner so it is synthesized from coal tar. In 1929, 345,000 pounds of the synthesized product sold for $2,154,000, which was a 50 per cent increase in production over the former year.[19]

Another compound produced synthetically and used extensively in confections and perfumes is cinnamon. It is also naturally obtained from the dried bark of cultivated trees grown in tropical climes.[20] Cinnamon consists principally of cinnamic aldehyde, $C_6H_5C_2H_3CHO$, 1 to 2 per cent volatile oil, tannin, sugar and coloring matter. It is also the chief constituent of cinnamon oil and cassia oil and is otherwise common in the vegetable world. Cinnamic aldehyde, like coniferyl alcohol, is similar to lignin in that it is resinified by mineral acids and is fundamentally a constituent of lignin. Cinnamic alcohol, $C_6H_5C_2H_3CH_2OH$, crystallizes in glistening monoclinic needles and has the odor of hyacinth.[21]

The structural formulas of some of the compounds mentioned, together with that of alpha lignin deduced by Klason, are shown herewith. The compounds can readily be identified with the nuclei of the lignin. The number possible is too great to enumerate.

LIGNIN ARYLS



Other valuable compounds similar to those shown are: resorcin, $C_6H_4(OH)_2$; saccharin, $C_6H_4CONH.SO_2$; salol, $HOC_6H_4COOC_6H_5$; aspirin, $C_6H_4O.COCH_2COOH$; and acetanilide, $C_6H_5N\ H\ COCH_3$, which are pharmaceuticals. Paraphenlenediamine, $C_6H_4(NH)_2$ is used in the rubber industry. All of these are of technical importance, worth a dollar or more a pound.

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Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

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Sizing

Paper Sizing Process. Raffold International Corporation. Belg. pat. 361,091, June 29, 1929.—The stock is mixed with an emulsion of paraffin and a carbonate filler. The paraffin emulsion is saponified and contains rosin size, or a mixture of rosin and ozokerite.—A.P.-C.

Determination of the Degree of Surface Sizing. Philip W. Codwise. Certain-teed Products Corp. Paper Mill 53, No. 8, 66-70 (Feb. 22, 1930).—The test suggested consists in seasoning the paper under the same atmospheric conditions (preferably 70° F. and 65 per cent relative humidity) as it will be tested, placing the sample on a horizontal flat surface in a well lighted position but away from direct radiation of heat, delivering exactly 1 cc. of water at 70°F. leaving the tip of the pipette immersed in the drop as the water discharges, and noting the time required for the water to commence to creep out from between its boundary of contact and to form a slight feathered edge around the drop. Before feathering sets in, there is a certain darkening or discoloration of the paper surface, and in the case of well sized papers that show no tendency to feathering upon prolonged exposure, the tendency of the surface beneath the drop to change in shade or depth of color often gives a further indication of the character of the surface sizing.—A.P.-C.

Delthirna Sizing Question. Ladislav Suran. Papier-Fabrikant 27, No. 41, 632-636 (Oct. 13, 1929).—The opinions of technical men on this question are gathered together and discussed. The advantages and disadvantages are enumerated and critically judged. Among the advantages are; a resin saving of 30 to 60 percent, general saving in labor, operation, felts, wires, and steam, system operates continuous and evenly, concentration of rosin soap is always constant, the alkali as well as the aluminum sulphate consumption is not raised, and finer precipitation is effected in the beater. The defenders of the old process of more or less free rosin contend that, the rosin savings are not certain, alum consumption rises to double, higher alkali consumption, danger of rosin specks on the paper because of alkali deficiency, the savings in steam, wires, felt are very small, the paper reacts acid, the paper desizes upon storage or while remaining in the beaters, the binding together of the fibers is weak, and with paper under 40 grams per square meter there is no saving of rosin.—J F. Ohlson.

Rosin Sizing of Paper. C. Wurster, Papier-Fabrikant 27, No. 43, 661-664 (Oct. 27, 1929).—Early history related. In rosin sizing the particles must be precipitated in the finest state possible, that is, almost in the molecular condition thus a milky solution is used to the greatest advantage. There is no doubt but that the carbon dioxide precipitates the rosin the easiest. It is a known fact that mills using water containing carbon dioxide seldom have trouble while mills whose water approaches distilled water have the most trouble.—J. F. Ohlson.

Dyes and Dyeing

Colors for Paper. Jacques Ehrenwerth. Fr. pat. 659,155, Aug. 20, 1928.—A composition for mixing colors for papers is composed of a solution of an alkali silicate with a salt giving fluidity, such as a chromate or bichromate and glycerine.—A.P.-C.

Coloring, Sizing, Impregnating or Other Treatments of Paper. I. G. Farbenindustrie Aktiengesellschaft. Eng. pat. 305,122, Jan. 31, 1928.—An elastic surface such as rubber is used on rollers of apparatus such as described in Eng. pat. 293,000.—A.P.-C.

Coloring Paper Webs on One Side During Manufacture. K. Morch. Eng. pat. 315,969.—In staining paper on one side during manufacture, the color is applied to the paper web at a point where it is semi-dry, that is, when the moisture content of the paper is about 30 to 40 per cent. The moistening apparatus comprises a roll faced with flexible material and running in a color bath. The paper web, during its passage through the dryers of the paper machine is pressed against this roll with such pressure that irregularities in the paper are forced into the facing of the roll without causing the two rolls to separate, thus obtaining uniformity of coating.—A.P.-C.

Dyeing Tissue Paper with Water-Fast Colors by Means of Acid Dyes by the Immersion Process. A. Landolt. Société pour l'Industrie Chimique à Bâle. Papier 32, 1105-1106 (Oct. 1929).—Dyeing tissue paper by the immersion process with acid dyes gives shades which are not fast to water. Addition of a luminum acetate to the dye bath gives fast shades. The process can be used only with certain dyes, which are enumerated. The procedure recommended is as follows: dissolve separately 240 g. of lead acetate and 163 g. of sulfate of alumina each in 1 liter of water, cool, mix, filter, and dilute the filtrate to 2 liters to give an approximately 5 per cent aluminum acetate solution. Add 400 cc. of this solution to 1 liter of 1 per cent solution of the dye. In certain cases it may be necessary to add from 20 to 50 cc. of concentrated acetic acid per iter of bath to prevent precipitation of a lake. Severe drying is required to fix the shade properly. Paper dyed in presence of aluminum acetate has a somewhat harsher feel, which is generally desirable for this grade.—A.P.-C.

Process for Changing of Color or Dye Affinity of Cellulose Containing Materials. Austrian patent 114,435 April 15, 1929, Herminghaus & Co. G. m. b. H. in Vohwinkel, Germany.—After pretreatment with alkali phosphorus oxychlorid is allowed to reach on the cellulose.—J. F. O.

Pulp Testing

Wood Pulp Testing. G. H. Gemmell. World's Paper Trade Rev., 1902, 1906 (Nov. 22, 1929); Paper Maker and Brit. Paper Trade J. 78, 615-616, 620 (Dec. 2, 1929); Paper Mill 53, No. 1, 14, 24 (Jan. 4, 1930).—A discussion of the importance of developing and adopting an internationally acceptable procedure for the testing of wood pulp.—A.P.-C.

Strength Testing of Wood Pulp. H. A. Rothchild, Kimberly-Clark Co., Neenah, Wis.; Ivar Lundbeck, Mo and Domsjo Co., Ornkoldavik, Sweden; and D. E. Cable, Oxford Paper Co., Rumford, Me. Paper Trade J. 90, No. 8, 264-265 (Feb. 20, 1930).—A detailed description of the procedure of the proposed official method of the Technical Association of the Pulp and Paper Industry, for determining the beaten strength of paper by means of a laboratory beater. It deals only with the furnishing and operation of the beater, since sampling, making of hand sheets and testing of the sheets are the same as for the determination of the initial (unbeaten) strength or of the beaten strength by the pebble or ball mill test.—A.P.-C.

Estimating Pulp Strength. James E. O'Connell. Lake St. John Paper Co., Dolbeau, Que. Paper Trade J. 89, No. 19, 59

(Nov. 11, 1929).—A description of the method used at the Lake St. John Paper Co., for determining the initial strength of sulphite and groundwood in the manufacture of news print. The samples are taken at regular intervals from the pulp leaving the fine screens and placed in the sheet machine without further processing. The method is essentially the same as the tentative T. A. P. P. I. method, with the following modifications: (1) the test sheets are not seasoned in a constant humidity atmosphere, but are first dried completely and then placed between sheets of blotting paper of known moisture content and put back in the press so that the moisture content of the sheets when tested is from 5 to 6 per cent; (2) the weight of the test sheets are 32 lbs. (24 x 36—500), which is the weight of the new print manufactured in this mill. The reliability of the tests is such that the proportion of sulphite to be used in the stock mixture going to the paper machines is determined from the figures obtained.—A.P.-C.

Consistency and Temperature Characteristics of the Precision Freeness Tester. E. A. Worm, International Paper Co., Glens Falls, N. Y.; and D. S. Davis, Container Corporation of American, Manayunk, Pa. Paper Trade J. 89, No. 23, 63-65 (Dec. 5, 1929).—Data are presented to show that, in the case of the Williams Precision Freeness Tester operating on sulphite, ground wood, book stock and mixtures of book stock and sulphite, freeness is a linear function of both sample weight and temperature. At constant temperature, variously hydrated stocks of a given type exhibit convergent freeness-weight curves, and at constant sample weight there exists, for each type of stock, a convergence point for freeness-temperature curves. The co-ordinated of both weight and temperature convergence points for these stocks are given. A chart for the purpose of converting freeness values obtained over wide ranges of sample weight and temperature to standard conditions is included and a table is given showing the error to be expected in using the theoretical in place of the actual weight convergence points in such a chart.—A.P.-C.

Paper Testing

Bursting Strength Test. F. T. Carson and F. V. Worthington. U. S. Bureau of Standards. Paper Mill 53, No. 8, 136-142 (Feb. 22, 1930).—A number of factors which were considered to be possible sources of error were studied. Clamping pressure must be sufficient to prevent any slipping of the sample, which causes results to be too high; a method is described for adjusting the clamping pressure without actual calibration of the clamping spring. Installing the rubber diaphragms in different manners had no significant effect. Reasonable variations in the speed of operation of the tester produced no significant effects on the results. The viscosity of the hydraulic medium has no appreciable influence. A metal orifice plate gives the same result as a rubber plate of the same orifice, when allowance is made for the fact that on clamping the rubber plate compression slightly reduces the size of the orifice.—A.P.-C.

Permeability of Paper to Liquids. J. E. Zundel. Papier 32, 1219-1222 (Nov. 1929).—From a comparison of the Carson, dry indicator, electrolytic and interacting solutions methods of determining sizing, the author considers that the dry indicator method is the best because it is theoretically the most accurate, and because it has the widest range of application as it is not limited to paper of certain colors and does not require excessive time even with heavy papers.—A.P.-C.

Paper Pinholes. James Scott. Paper Maker and Brit. Paper Trade J. International No. 55-57 (1929).—It is suggested that much information as regards fiber characteristics of paper can be obtained by microscopical examination of pin pricks made in the paper. This is illustrated by showing and discussing microphotographs of such pin pricks in sermon paper, white blotting paper, dark brown wrapping paper and coated art paper.—A.P.-C.

Proposed Official Testing Methods. Anon. Paper Trade J. 90, No. 1; 48-50, (Jan. 2, 1930).—A detailed description of the methods for determining the fiber composition of paper, for the quantitative determination of paraffin in paper and for the quantitative determination of starch in paper, which are proposed for adoption as official by the Technical Association of the Pulp and Paper Industry.—A.P.-C.

Testing Unimpregnated Roofing Felt. Anon. Paper Trade J. 89, No. 21, 51-52 (Nov. 21, 1929).—A detailed description of the proposed official method of the Technical Association of the Pulp and Paper Industry.—A.P.-C.

Government Investigations of Paper. Byron L. Wehmhoff. Government Printing Office, Washington, D. C. Paper Industry 11, 1970-1971 (Feb. 1930).—Results are given of a comprehensive survey as to the quality of news print being used at the present time by American publishers.—A.P.-C.

Eliminating Personal Factors from the Measurement of Color and of Gloss. L. Blin Desbleds. World's Paper Trade Rev. 92, 1658-1662, 1704, 1706 (Nov. 8), 1748-1754 (Nov. 15, 1929); Paper Maker & Brit. Paper Trade J. 78, 464A-464H (Nov. 1, 1929).—After discussing the shortcomings of the human eye as an instrument for measuring and comparing colors and the mechanism of color sensation production, the use of the T.C.B. photoelectric photocolorimeter (Printe, Pulp Paper Mag. Can. 171-173, 201-205 (1928), Toussaint, Paper Industry 9, 1702-1703 (1928) is described, showing how its use completely eliminates the personal equation.—A.P.-C.

Qualitative Method for the Determination of Paraffin in Paper. Frank R. Filz. Chemist-Analyst 18, 4 (1929).—Digest the sample in chloroform, which dissolves the parafin, and add excess of alcohol to the evaporated solution which precipitates the paraffin.—A.P.-C.

Measurement of Fluff on Litho Printing Paper. Anon. World's Paper Trade Rev. 92, 1086 (Sept. 27, 1929).—The fluff which causes trouble in litho off-set printing does not consist in the irregularities, fibers, etc., which stand up on the surface of the paper, but rather it is the material which is actually removed by contact with the tacky surface of the printing blanket, etc. This condition can be matched by the following test: flow a 10 per cent solution of rosin in carbon tetrachloride over a clean microscope cover-glass, let dry till the surface is tacky (about 30 seconds), press lightly into contact with the paper to be tested, remove, repeat six times, dip in a strong solution of methylene blue for about 10 minues to dye the material (fiber, fillers, etc.) removed from the paper, wash, dry, mount in Canada balsam on a microscope slide and examine under low magnification (about 60 diameters). The behavior of the paper on the press can be foretold from the results of the test, as follows; less than 2 fibers per sq. in., no trouble at all from fluff; about 6 fibers per sq. in. (nearly all chemical wood pulp), practically no trouble; 15 fibers per sq. in. (about two-thirds esparto and one-third chemical wood pulp), gives a certain amount of trouble, 80 fibers per sq. in. (over 75 per cent esparto) pronounced trouble.—A.P.-C.

Light, A New Measuring Rod for Paper. Frederick A. Pearson. Pearson Research Laboratories, Great Barrington, Mass. Paper Trade J. 90, No. 8, 131-133 (Feb. 20, 1930); Paper Mill 53, No. 8, 102-106 (Feb. 22, 1930).—The opacimeter is an instrument consisting essentially of a source of light and a photo-electric cell, which are mounted on opposite sides of the sheet on a paper machine, after the dryers, and which can be mounted across the full width of the sheet and back. The variations in weight of the paper cause corresponding variations in opacity, which in turn vary the current passing through the photo-electric cell. A reliable and accurate amplifying system for this current was obtained by the use of a new balancing circuit using two vacuum tubes such as are used for radio amplification. The voltage of the source of light is kept constant to within 0.01 volt. The instrument travels slowly across the machine (about 18 min.), but returns quickly (about 30 sec.), and makes a record

of the variations in weight across the width of the sheet.—A.P.-C.

Contribution to Strength Determination. K. Rieth, Papier-Fabrikant 27, No. 45, 693-694 (Nov. 10, 1929).—Of great importance is the relative humidity, upon which the moisture content of the paper is dependent. From a moisture content of 5.8 to 9.1 per cent there is a 25 per cent difference in tearing strength. The inaccuracy of the hair hygrometer is mentioned The author then recommends that tests be conducted at certain known moisture content and not according to the usual 65 per cent relative humidity. The possible errors in the determination of the degree of beating are discussed, such as uniformity of wire. In the beating of pulp with a ball mill the number of revolutions are not always taken into account with the time.

Nature of Paper. Casimir Wurster. Papier-Fabrikant 27, No. 45; 700-703 (Nov. 10, 1929).—The Prussian Government makes two physical tests on all the paper they buy. (1) tensile strength on a strip a certain width, (2) and its stretch. The formation of paper occurs in two general ways, in an unbeaten stock the long curly fibers twine around each other and upon pressing and drying from the sheet, and in a beaten stock the bruised fibers become hydrolyzed and stick to each other to a very great extent. A paper made from well beaten stock is not as lasting as a paper free from gelatinous cellulose. Acids and free chlorine are very deterimental to the durability of the paper. If the Prussian Government wants durability, they should have a paper that is free from inorganic salts and soluble organic bodies, and not one that has high physical tests only. The slimier the paper the greater elasticity, which disappears when the paper becomes dry. A pure cellulose gives a paper which is not easily hydrated and therefore less tensile strength.—J. F. O.

New Rigidity Tester for Paper. E. H. Riesenfeld and T. Hamburger. Papier-Fabrikant 27, No. 46, 709-710 (Nov. 17, 1929).—The stiffness or rigidity of paper has always been determined by feeling. A method for testing the rigidity is now devised whereby the lighterweight papers such as newsprint can be tested. The principle which the tester is based upon is that a strip of paper held in a horizontal direction supported on both ends bends or sags in the center by its own weight. The angle of this bend is measured. The weight of the paper and moisture content are influencing factors and must be taken into consideration.—J. F. O.

Rag Content Paper Manufacturers' Laboratory. Jessie E. Minor. Rag Content Paper Manufacturers Association. Paper Trade J. 90, No. 5, 65-66 (Jan. 30, 1929).—An outline of the purpose of the laboratory and of the nature of the work to be carried out, more particularly on the permanence of paper.—A.P.-C.

Alkaline Processes

Process for the Utilization of the Precipitated Black Liquor in the Manufacture of Sulphate Pulp. D. R. P. 483,068 July 17, 1924. Eric Hagglund Abo. Finland.—The idea of the process is to attain the highest possible yield of valuable organic substances, especially acetone and methyl alcohol. The process consists in subjecting the liquor to heating under pressure continuously, so that a part of the organic material precipitates out in a carbonaceous and pitchy form. And, in order to recover the remaining valuable organic residue, the liquor is evaporated to dryness and the residue is subjected to dry distillation. The alkalinity of the liquor is suitably raised before the pressure heating, by raising its content of sodium hydroxide.—J. F. O.

Process for the Utilization of the Precipitated Black Liquor in the Manufacture of Sulphate Pulp. D. R. P. 484,304 June 23, 1925. Addition to patent 483,068 July 17, 1924, Eric Hagglund Abo, Finland.—The process of the main patent is changed in that the liquor is causticized after successive, pressure, heat treatment, and concentration through evaporation, the resulting sodium acetate being obtained by crystallization, while the mother liquor is again introduced into the continuous cycle as white liquor. The liquor can be regulated so that the sodium acetate content in the white liquor remains constant.—J. F. O.

Process for the Purification of Alkali Liquors, for Example, Waste Liquors Which Contain Cellulose. Swiss patent 133,-468 I. G. Farbenindustrie A. G.—The alkali liquor is treated at temperatures over 100 degrees centigrade without catalysors, with gases which contain up to 100 per cent oxygen, and at a partial pressure of over one atmosphere, in order to purify it from organic substances. It is freed from the alkali carbonates contained in the liquor by the addition of alkaline earth hydroxides and separated from the precipitates thus formed.—J. F. O.

Sulphite Process

An Early Bisulphite Cooking Process. James Beveridge. Paper Industry 11, 1759-1760. (Jan. 1930).—A brief description of the process used in the early nineties at Northfleet, England, for the preparation of sodium bisulphite cooking liquor and for the production of sulphite pulp therefrom.—A.P.-C.

Sulphur Burning in Sulphite Acid Manufacture. Chas. M. Cooper Massachusetts Institute of Technology. Paper Trade J. 90, No. 12, 67-68 (March 20, 1930).—A brief summary of present theory and practice in the combustion of sulphur for sulphite acid manufacture, showing how little basic study has been devoted to it, and suggesting the two following lines of attack as offering possibilities: improvement of the control of the sulphur vaporizing process so that less excess oxygen need be employed; development of cooling equipment which will utilize the heat now wasted.—A.P.-C.

Scandinavian Sulphite Manufacture. John F. Ohlson. New Brunswick International Paper Co., Dalhousie, N. B. Paper Trade J. 90, No. 6, 71-73 (Feb. 6, 1930).—An outline of present-day practice in the manufacture of sulphite pulp in Sweden and Finland.—A.P.-C.

Corrosion Resisting Alloys for Pulp and Paper Mills. Walter M. Mitchell. Central Alloy Steel Corp., Massillon, Ohio. Paper Trade J. 90. No. 8. 155-159 (Feb. 20, 1930).—A brief discussion of the corrosion phenomena, and of the suitability of chrome-nickel-molybdenum-iron alloys as non-corroding metals in pulp (sulphite) mills, with general indications regarding the precautions which must be taken in fabrication to ensure maximum corrosion-resisting properties.—A.P.-C.

Report of the T. A. P. P. I. corrosion committee. J. D. Miller. York Haven Paper Co., York Haven, Pa. Paper Trade J. 90, No. 8, 195 (Feb. 20, 1930).—A brief report on the results of a survey of the sulphite industry as to corrosion losses. Cooperation of manufacturers of ferrous and of non-ferrous sulphite-resisting alloys is being enlisted in the study of the problem.—A.P.-C.

Ferro Alloys in the Sulphite Mill. Andreas Christensen. Rhinelander Paper Co., Rhinelander, Wis. Paper Trade J. 90, No. 8, 266. (Feb. 20, 1930); Paper Mill 53, No. 8, 90, 92 (Feb. 22, 1930).—A brief account of the author's experience with a high chromium iron (25 to 30 per cent chromium, 1 per cent manganese, 0.5 per cent nickel, 0.5 per cent silicon, 0.25 per cent carbon) and with a so-called "18-8" alloy (17 to 20 per cent chromium, 7 to 10 per cent nickel, 0.5 per cent manganese, 0.5 per cent silicon, 0.15 per cent carbon). A disk and seat of the former has been in continuous use in a liquor-relief-line valve for about 2 years without showing any signs of being attacked; a piece of tubing of the second alloy has been in use for 15 months in a liquor-relief line, next to the digester, without showing any signs of wear. The applications of these alloys in sulphite mills is briefly discussed.—A.P.-C.

Some Properties of Chromium-Nickel Steels. H. A. DeFries. The Ludlum Co. Pulp Paper Mag. Can. 29, 295-297 (Feb. 20, 1930).—A brief discussion of the properties of chromium-nickel steel, from the standpoint of their utilization in the sulphite in-

dustry, outlining their behavior towards sulphur dioxide and chlorine solutions, and indicating the care required in the selection of such alloys and in their fabrication in order to avoid failure through impairment of their anti-corrosion or mechanical properties.—A.P.-C.

Reinforced Concrete Acid Towers. W. Kjeldüsch. Zellstoff and Papier 9, No. 11, 754 (1929).—A descriptive article on the construction of a few of the recent acid tower systems in Finland. The relation of height to the inside diameter is approximately 14 to 1.—J. F. O.

Electric Filter for the Oven Gas from a Pyrites Burner in the Sulphite Mfg. F. Blass Wochenblatt für Papierfabrikation 60, No. 45, 1397-1404 (Nov. 9, 1929).—The first experiments leading to the perfection of the Cottrell-Moller apparatus is related. The process is fully described in all its details and ramifications. Arsenic and SO_3 gas is not removed with the other dust and impurities because of the high temperature. To remove SO_3 gas, arsenic and selenium, a wet electric filter is used. Only the wet gas purification is required with sulphur burners. It is the SO_3 gas that is visible at the top of the towers and this white steam or smoke disappears when the sulphur burner gas has been treated by wet electric filter. The cost at a Swedish mill for preparing acid from sulphur burners and from pyrities is compared. With pyrite burners using the wet and dry electric filters the cost per ton SO_3 gas is approximately nine dollars, while with the sulphur burners the cost is approximately fifteen dollars, sulphur costing at the mill $28.50 per ton. This is equivalent to a saving of 80% of the complete cost of a pyrite gas filtering plant—J. F. O.

Equilibria in Sulphur Dioxide Solutions. W. Boyd Campbell and Otto Maass. McGill University, Montreal. Research Notes 2, 23-36 (1929); Canadian Journal of Research 2, 42-64 (Jan. 1930). The investigation described deals with the equilibria existing in a water solution of sulphur dioxide. The vapor pressures and conductivities of solutions of sulphur dioxide were measured over the temperature range 23° to 135°C, at various concentrations up to 8 per cent. The densities of the aqueous solutions up to 15 per cent were also measured. A discussion of the various equilibria in the light of these data leads to the conclusion that sulphurous acid is one of considerable strength its apparent weakness being due to the small amount of H_2SO_3 actually present. With rise in temperature the free sulphur dioxide increases and the hydrogen-ion concentration of the sulphite liquor used in current practice is so low that it seems highly improbable that the cooking reaction is due essentially to this factor. Apart from the bearing this work may have on the theory of sulphite cooking and the theory of the equilibria existing in the SO_2H_2O system, it fills a considerable gap in the data regarding sulphur dioxide.—A.P.-C.

Gas Strong in Sulphur Dioxide. George A. Richter assignor to Brown Co. U. S. pat. 1,724,421, Aug. 13, 1929.—Sulphur-burner gases are passed through a confined space in contact with a surface material such as spiral brick filling and with water so that the water progressively absorbs the sulphur dioxide and the gas becomes progressively weaker in sulphur dioxide; the acidulated water is heated and passed through a confined space in contact with inert surface material such as spiral brick filling; gases from the first treatment are passed in contact with the acidulated water counter-current-wise to take up sulphur dioxide from the water and to produce a gas rich in sulphur dioxide and suitable for making an acid cooking liquor.—A.P.-C.

Extracting Cellulose—Continuing Materials from the Sudd or Papyrus Plant. B. Dorner.. Eng. pat. 316,413, July 7, 1928.—The material is cut into lengths and boiled for 1 to 2 hours at 1 to 2 atmospheres pressure with sulphurous acid. The boiled material is then washed on a screen to remove pithy matter, alternatively, the material may be digested with a very dilute sulphurous acid solution, and then left to ferment, after which the pithy matter is readily removed by washing. The resulting half-stuff is preferably treated with salt to prevent mold growth.—A.P.-C.

Cyclic Process of Fiber Liberation. George A. Richter assignor to Brown Co. U. S. pat. 1,730,383. Oct. 8, 1929.—Raw cellulose material such as wood is digested under fiber-liberating conditions in a sulphurous acid solution containing sodium-boron salts, such as borax, which serve to facilitate production of high-grade pulp and regeneration of the liquor.—A.P.-C.

Production of White High-Alpha-Cellulose Fiber Suitable for Paper Making. George A. Richter assignor to Brown Co. U. S. pats. 1,741,540, Dec. 31, 1929, and 1,742,218 and 1,742,219, Jan. 7, 1930.—No. 1,741,540—Material of good paper-making properties and suitable for conversion into cellulose derivatives is obtained by treating raw sulphite or other pulp with an alkaline liquor to remove non-alpha-cellulose constituents and to produce a high alpha-cellulose fiber, bleaching the fiber, and then treating the bleached fiber with an alkaline liquor to remove non-alpha-cellulose constituents remaining after the bleaching operation. No. 1,742,218—Predigested sulphite pulp is repeatedly digested in an alkaline liquor such as caustic soda solution; substantially all the spent liquor is re-employed in another digestion of pulp after addition of sufficient digestion agent such as caustic soda to make up for losses and to provide for effective digestion. No. 1,742,219—Wood chips are digested in an acid sulphite cooking liquor in which the free sulphur dioxide and the combined sulphur dioxide are in approximately equal proportions of 3 to 4 per cent each, under conditions of high temperature and pressure; the pulp is separated from the spent digesting liquor, treated at a consistency of 5 to 6 per cent, at room temperature, for about 30 minutes to 2 hours, with a solution of caustic soda containing an amount of alkali equal to from 1 to 1.75 times the weight of the dry fiber.—A.P.-C.

Process for the Production of Sulphite Pulp. George A. Richter assignor to Brown Co. U. S. pat. 1,735,014, Nov. 12, 1929.—The material is digested in a solution of sulphur dioxide and sodium bisulphite containing a soluble barium salt such as barium bisulphite in sufficient quantity that it precipitates an insoluble barium salt when sulphur dioxide is relieved during the digestion.—A.P.-C.

Chemical Pulping Process. Hjarne Johnsen assignor to Hammermill Paper Co. U. S. pat. 1,737,590, Dec. 3, 1929.—Wood or other material to be pulped is cooked with a liquor such as an acid or neutral liquor to which has been added a solution of waste cooking liquor containing carbohydrates, from which the lignin compounds have been wholly or partly removed.—A.P.-C.

Absorption Tower for Gases, especially for the absorption of sulphurous dioxide for the preparation of sulphite liquor; whereby vertical pipes are surrounded by a casing charged with the absorbing material through which the gases pass. D. R. P. 484-234 January 25, 1928. A. Danninger.—J. F. O.

Regulation of the Calcium Content of Sulphite Liquors. D. R. P. 480, 672 K1 12i Metallgesellschaft. A. G. Frankfurt. a.M.—In the main patent a process is described for the regulation of the calcium content in sulphite acid, in which the required low temperature is attained by the cooling of the shower water in the acid towers, with the help of special refrigeration. A similar action can now be attained in such a manner, that the relief gases which are conducted into the tower, are cooled so that the desired temperature is reached in the acid towers. In practice, the relief gas is conducted immediately through various coolers using river or ground water and finally sent to a special cooler. This cooler is maintained at a low temperature by means of separate refrigeration. The cooled relief gases are led to the acid towers where they come in contact with water sprinklers, whose temperature corresponds to the normal outlet temperature,—J. F. O.

Sulphite Waste Liquors

Concentrating Sulphite Waste Liquor. R. W. Miller. Can. chem. Met. 14, 3-5 (Jan. 1930).—A description of a new type of evaporator. It consists of an outer vessel equipped with the customary fittings. The heating system is composed of a num-

ber of concentric rings, each consisting of two cylindrical, heavy sheet metal jackets, with reinforcing rings welded on at the top and bottom, through which the heating steam is admitted. All connections for live steam condensate and deaeration are fixed to the bottom and the cylindrical surfaces may be cleaned continuously during operation by means of slowly rotating brushes, which are pressed lightly against the surfaces in contact with the liquor, thus brushing off the scale as fast as it is formed. A rotating beater arm is provided over the heating rings to combat the formation of foam. The merits of the apparatus for the evaporation of sulphite waste liquor are discussed.—A.P.-C.

Carbonizing the Organic Constituents of Sulphite Waste Liquor. Carl G. Schwalbe. U. S. pat 1,731,354, Oct. 15, 1929.—The liquor is treated with sulphuric acid (less than 3.6 kilos per 100 liters of the liquor) and heated for about 8 hours to about 180°C. under 10 atmospheres in order to obtain a carbonized material suitable for fuel, etc.—A.P.-C.

Recovery of Sulphite Waste Liquor for Re-Use. Wilhelm Michael and Albert Palm assignors to I. G. Farbenindustrie Aktiengesellschaft. U. S. pat. 1,723,800, Aug. 6, 1929.—After cooking with liquor containing sulphurous acid and ammonia, the residual free sulphur dioxide is expelled, the liquor is heated in a closed vessel to above 150° C., carbon is filtered off, and ammonia is expelled by use of a stronger base such as slaked lime.—A.P.-C.

Morterud's System for Sulphite Cooking. Wochenblatt für Papierfabrikation, 60, No. 44: 1368-1369 (Nov. 2, 1929).—The system is entirely within the digester and usually consists of three perforated spirals within the digester through which steam is introduced when necessary, as well as a pump for the circulation. After bringing the digester up to pressure the circulation may be reversed by pumping from the bottom to the top, the line being within the digester along the wall, the pump being located a little below the center of the digester. The bottom and top of this line is provided with a perforated pipe or screen. The advantages claimed for this system are, everything is cooked uniformly, (no under or over cooked chips), larger yield by no over cooked fibres or under cooked chips, cleaner stock, shorter time, better use of chemicals and higher production as the digestor can be filled to a greater density.—J. F. O.

Process for the Preparation of Methyl Alcohol from Lignin. D. R. P. 484-167 January 9, 1928. Wood Hydrolyising. A. G. Heidelberg.—Lignin or lignin compounds, in the presence of water, are treated with chlorine without heating and from the chlorination product methyl alcohol is obtained through steam distillation.—J. F. O.

Miscellaneous Pulping Methods

Production of Cellulose. Papeteries Navarre. Fr. pat. 663,013, Feb. 15, 1928.—Cellulose is extracted from vegetable substances by carrying out the boiling in a series of boilers, in which the liquor circulates in such a way that the most boiled material receives fresh liquor and fresh material receives the used liquor.—A.P.-C.

Process for the Conversion of Plant Fiber Material and Related Products by Means of Concentrated Nitric Acid. Austrian patent 113-974, March 15, 1929. Heberlein & Co.—The process consists in handling hydroacetate with a mixture of dichloromethylene and alcohol. The product serves as a laquer, impregnating material or surfacer, for example in the impregnating of cloth on the wings of airplanes.—J. F. O.

Cooking Process. I. Role of Water in the Cooking Wood. S. I. Aronovsky and Ross Aiken Gortner. Minnesota Agricultural Experiment Station, St. Paul, Minn. Ind. Eng. Chem. 22, 264-274 (March 1930).—This is a report on the first of a projected series of studies designed to ascertain the role of each constituent of the liquor in the cooking of wood. The maximum yield of total solids in the cooking liquor was 19.9 per cent of the original weight of the wood obtained in a 2-hour cook at 100 lbs. pressure (170°C). The sugars, pentoses, and pentosans (furfural-yielding compounds) in the liquor reached a maximum in the 2-hour cook at 100 lbs. (170°C) for the sugars, and in 9 hours at 50 lbs. (148°C) for the pentosans, and then decreased, showing that these substances were decomposed with increasing time and temperature of cooking. Lignin (as determined by the 72 per cent sulphuric acid method) dissolved (depolymerization) to a small extent in the water. Furfural, formed in the cooking process, reached a maximum in the 2-hour cook at 150 lbs. (186° C.), and then gradually decreased with increases in time and temperature. A small amount of volatile acid was formed in the cooking process. The yields of residual wood decreased with increases in time and temperature to 61 per cent of the original wood in the 12-hour, 150-lb. (186°C.) cook. The cellulose in the residual wood decreased progressively with increased time and temperature to 63 per cent of the original cellulose in the 12-hr., 150 lb. cook. The alpha-cellulose decreased at the higher pressures at a greater rate than did the total cellulose, indicating that hydrocellulose was formed. The 12-hr., 150-lb. cook showed a destruction of 45.5 per cent of the alpha-cellulose originally present in the wood. The pentosans in the residual wood decreased progressively with time and pressure, so that only 1.3 per cent of the amount present in the original wood remained after cooking for 12 hrs. at 150 lbs. The total quantity of lignin in the wood remained practically constant, but it was found that a part of the lignin was altered so as to be soluble (peptized?) in alcohol. This is probably due to depolymerization. It was shown, by adding calcium carbonate to the autoclave charge, that the yield of total solids in the extract and of furfural in the digester condensate, in cooking for 2 hours, at 150 lbs. (186°C.), was not due to the action of acids formed in the process but only to water per se and to temperature.—A.P.-C.

Beating

Solution of Jordan Problems. Henry Bert. Monroe Paper Products Co. Paper Mill 52, No. 43, 10, 40 (Oct.. 26, 1929).—Experience with John Bolton and Sons' bandless jordan plug under the hard service conditions of the manufacture of test liner board showed that it eliminates practically all troubles due to previous forms of filling. On changing over to this type of plug, jordan-filling costs were reduced from 27 cents to 9 cents per ton of board.—A.P.-C.

Beater. Eugen Kutter. Fr. pat. 663,222.—The machine consists of a cylindrical casing in which is mounted a horizontal annular rotating beating plate co-acting with a fixed plate in the bottom of the casing. An inner annular partition is provided so as to cause circulation of the stock between the plates, outwards to the wall of the casing, vertically along this wall, and back towards the center where it is again drawn down between the plates.—A.P-C.

Bed Plate for Beating Engines. Albert J. Allison assignor to Simonds Worden White Co. U. S. pat. 1,727,329, Sept. 10, 1929.—The bed plate comprises two groups of bars, each assembled with suitable spacers between the bars and a broad spacer between the two groups. Bolts pass transversely through the entire structure to bind the whole together. The broad spacer between the two groups of bars consists of an I-bar placed beneath the bolts with its feet abutting the opposed bars, a channel member lying on top of the bolts with its flanges extending upward and abutting the opposed bars, and bolts traversing the bottom of the channel and the web of the I-bar by means of which the I-bar and channel bar are clamped to the transverse bolts.—A.P.-C.

Hydration of Cellulose by Beating. W. Boyd Campbell and Lloyd M. Pidgeon. McGill University, Montreal. Research Notes 2, 15-20 (1929); Pulp Paper Mag. Can. 29, 185-190 (Feb. 6, 1930).—By measuring the vapor tension of pulp beaten to various degrees, it was shown that beating does not alter the hydration of pulp. The properties of beaten pulp are explained on the theory that beating is simply a mechanical action, whereby the external surface of the fiber is greatly increased so that the crystallizing forces of the cellulose may more ef-

fectively be exerted in binding fiber to fiber in the sheet. This is essentially the idea held by many practical paper makers, except that the adhesion of fibers to one another by crystallization forces has been added to the idea of adhesion by entanglement.—A.P.-C.

What Work a Jordan Will Do. Harry S. Spencer. Howard Smith Paper Mills, Beauharnois, Que. Pulp Paper Mag. Can. 29, 198-201 (Feb. 6, 1930).—A general discussion of the function of the jordan and of its possibilities and merits in complementing (or even replacing entirely in some cases) the work of the beater.—A.P.-C.

Improved Equipment Popular. Anon. Paper Mill 53, No. 8, 116-120 (Feb. 22, 1930).—A brief discussion of the merits of the short-tapered jordan, new breaker beater with steel and iron tub and junk remover, multiple continuous beating system and Hardinge rod mills, built by the Shartle Bros. Machine Co., Middletown, Ohio.—A.P.-C.

Miscellaneous

Process for the Manufacture of Printing Colors from the Sulphite Waste Liquors. M. Ludwigsen, Appleviken, Sweden. Swedish pat. 68, 241. (March 2, 1927).—The purposely concentrated liquor is separated through the addition of alkali or earth alkalis which gives rise to the neutralization and saponification of the liquor and the adaptibility of emulsification of the fatty substances, such as plant oils and similar substances. The saponification process is interrupted after reaching the desired stage, by the addition of calcium, sodium or other metallic salts. The fatty materials are emulsified in the liquor until the mixture takes on a consistency suitable for the purpose.—J. F. O.

Electricity Aids the Mechanical Drive. F. M. Roberts. General Elec. Co., Schenectady, N. Y. Paper Trade J. 90, No. 21, 54-55 (May 22, 1930).—Considerable reduction in the wear of board machine felts equipped with mechanical drive has been effected by the following arrangement recently developed with a geared direct-current motor rated at 7.5 h.p., 1150 r.p.m., and each cylinder mold has a motor rated 3 h.p., 1150 r.p.m.; the first press is driven as before through a mechanical clutch from the backline shaft. The later drives a direct-current generator which has constant field excitation and the armature voltage of which varies as its speed. An electric limit switch is attached to the first press clutch lever mechanism and controls the closing of the generator line contactor when the clutch is being engaged, and the opening of the line contactor when the lever is being moved to disengage the clutch. As soon as the line contactor closes, a definite time relay which controls resistance in the generator field circuit functions, cutting out the resistance and allowing the generator field to build up. The wear and tear of the first press clutch is greatly reduced and the sheet formation is improved by relieving the felt strain at the cylinder molds.—A.P.-C.

Removable Covering for Plaster Rolls. James T. Johnston assignor to American Writing Paper Co. U. S. pat. 1,752,005, (March 25, 1930).—The roll is provided with a longitudinal slot, which is grooved along one side to form a recess in the lower part of the slot. The upper ends of the opposite sides of the slot are preferably rounded to provide a smooth surface for the end portions of the covering. The latter is preferably made of a sheet of flexible metal, at each end of which is fixed a substantially rigid bar. Th covering is secured on the roll by inserting one of the reinforcing bars in the groove of the slot, wrapping the cover around the roll, placing the second reinforcing bar in the slot and applying a clamping bar provided with a shoulder to engage the second reinforcing bar and hold it in position. The clamping bar is secured in place by means of bolts which screw into the body of the roll at the bottom of the slot.—A.P.-C.

Process for the Treatment of Paper, Board and Other Substances Serving for the Same Purpose, During Its Manufacture. Ing. Alex Lampen, Imatra, Finland. Finnish pat. 12,717 (Oct. 12, 1927).—Cooked ground wood pulp or a mixture of this with other fibers is treated with alkalies or earth alkalies, beaten and as such, worked on the machine, or otherwise the alkali is previously neutralized, partially or completely with aluminum sulphate or similar action substances.—J.F.O.

Arrangement for the Wrapping of Wares, Especially Paper. Dr. Ing. Alois Danniger and Dipl. Ing. Richard Kastner, Steyermuhl, Austria. Austrian pat. 116,420 (Sept. 15, 1929).—The uniting of an endless, continuous or intermittently travelling conveyor belt, serving as a wrapping table, with a conveyor for feeding the packing materials in band form, driven automatically or by hand and provided with one or more cross cutters and if necessary longitudinal slitters for the packing material, whereby the dimentions of the piece cut off can be regulated.—J.F.O.

Automatic Paper Sorter. Gustav Sulz IV, Teesdorf, Nieder osterreich, Austria. Austrian pat. 114,704.—The invention consists essentially of an arrangement of two micro motors which measure the thickness of the paper plate on both sides, simultaneously and is electrically connected with the piling arrangement.—J.F.O.

Emulsions for Use As Detergents In Dyeing, Paper Making, etc. F. W. Atack, Eng. pat. 299,817, April 19, 1927.—A liquid emulsion readily miscible with water is prepared by emulsifying a grease solvent such as tricholoroethylene or other chlorinated hydrocarbon, in water by use of Turkey red oil and stabilizing the emulsion with bentonite or similar natural colloidal hydrosilicate. Small proportions of fatty acids and ammonia may be added. Emulsions thus formed may be used, among other purposes, for removing ink from paper stock and for application to the fourdrinier wires or to the sulphite digester or wood grinder in the paper making industry.—A.P.-C.

Washing Cooked Pulp. Bror N. Segerfelt. Fr. pat. 653,285, April 21, 1928.—In the production of pulp by boiling cellulosic substances with an alkaline liquor in a digester and washing in diffusers, the strongest spent liquor from the diffuser, after concentration if necessary, is used for addition to fresh liquor for the digester to obtain the amount necessary for boiling. The first washing of the digested pulp is carried out with residual liquor having a specific gravity not below 1.09.—A.P.-C.

Slime Prevention and Shrinkage. D. K. Pattillo, National Aluminate Corp., Chicago. Paper Mill 52, No. 38, 18, 26 (Sept. 21, 1929); Paper Trade J. 80, No. 16, 55-57 (Oct. 17, 1929); Pulp Paper Mag. Can. 28, 627-628, 650 (Oct. 24, 1929).—A brief discussion of the harmful effects of slime in paper making and of the advantages of preventing slime formation by appropriate chlorination treatment. An important advantage is the possibility of using a closed white-water system, particularly in conjunction with suitable coagulating treatment, for which purpose chlorinated copperas, sodium aluminate and alum are particularly suitable.—A.P.-C.

Decomposition of Straw with Nitric Acid. H. Suida, H. Sadler and F. Noss. Papierfabr, 27, Fest- u. Auslandsheft, 71-79 (1929).—The effect of temperature, concentration of acid and conditions of washing with sodium hydroxide, etc., on the yield of cellulose has been investigated. Mild conditions of acid treatment must be chosen in order to give satisfactory results, and pretreatment of the straw with steam or hot water has no advantage over direct mixing of the material with acid at the correct temperature. Acid of 1-10 per cent by weight was used four times from about 0.5 to 3 hours at temperatures of 60 to 100°, and the material was washed with sodium hydroxide solution (about 2 per cent) at 90° to remove residues of incrusting material. The yield of cellulose decreases lineraly with increasing temperature of decomposition, independent of varying acid concentration. It also decreases with increasing acid concentration quickly up to 5 per cent acid and thereafter slowly up to 10 per cent acid, while a further decrease takes place with increasing concentration of the sodium hydroxide used for washing. To a definite consumption of nitric acid there corresponds a definite concentration of acid, decomposition temperature and yield of cellulose.—C.J.W.

Section of the
COST DEPARTMENT
of the
American Paper and Pulp Association

Edited by T. J. Burke C. A. Director Cost Dept.

Planning Production and Control of Materials

By E. W Carpenter[1]

"Planning Production and Control of Materials," the subject chosen for our consideration this evening, constitutes a very important phase of control in the operation of modern business. Control is now definitely established in nearly all divisions of business management. We have control of sales, control of financial operation, manufacturing, operation expense, but have we control of *profits,* which after all is the source from which returns on invested capital must be received, by which we measure a company's progress and right for continued existence?

Planning production and control of materials can be accomplished much more efficiently and economically if sales, and the ultimate end, *profits,* are carefully planned for the future period.

What steps are next taken to bring under control for the purpose of proper planning the actual operations and functions of each division to secure the very essential result, net profits?

To my mind, budgetary control best fills this need. Budget control is not a new idea by any means, although many consider it as such with regard to its application in the commercial field. Budgets have too often, I think, been regarded only as a means of controlling expenses. The fact that they can play a most important part in the control of each division of operation has been too often neglected.

As this is not a treatise entirely on budgets, I will endeavor to cover briefly the entire system before dealing with the production budget in relation to planning.

Division of Budget Control

Budget control as practiced in our organization breaks down into the following divisions:

Sales and Sales Expense.

Manufacturing Including Engineering and Overhead Expense.

Financing.

We take estimated quota of unit sales. This quota must of necessity be formulated on the basis of careful analysis of markets, sales expectations and co-operation with the manufacturing division as to capacity of production, etc. It is only after careful revision that a sales budget can be arrived at by units showing expected delivery schedules, which may be forwarded to the production division.

The type of business will control the length of notice given a planning department. Some businesses depending on mill supplies of steel, brass, etc., and requiring the making of special tools and dies, etc., requires 6, 8 and 10 weeks' notice. I think the hardest problem that the plant has to impress upon the sales division is that commodities are not made over-night, and it is only by careful budget of sales that such information is forthcoming. Upon establishing the sales quota, extensions are then made at their selling price, arriving at our sales volume. We then determine material and labor costs, establishing standards to which we apply plant overhead, absorbing our total estimated expense for the period. Then we add administration and selling expense, including advertising expense pro-rated to absorb the total. These items are all broken down into units, the result being net profit per unit and in total. The original budget may be revised many times before arriving at a satisfactory picture of operations. In order to control this plan we operate all departments on monthly budgeted expenditure, supplying statements to each department head, showing comparisons of actual against budget.

Financial requirements are gauged and, with budget control as a background, we find are fairly accurate. Sales quotas are established and checked continually, and at the end of each month we know exactly the position to that date, in relation to the budgeted plan as a whole.

The Production Budget

I might state here that during 1929 our expense budget compared with the actual expenditure was less than ,92%, the variance being over the budget and this achieved after only two years' operation under the budget system. But where, you ask, is the relation between this and the planning department, so we will consider for a short time the production budget in particular.

The budgeting of production presents two main problems.

1—Determination of the total amount of each unit to be manufactured during a budget period.

2—Scheduling of production to assure deliveries of the finished article, which will meet with sales demands.

The sales estimate should be used by production department in estimating the total volume of production. In arriving at the production, consideration must be given to inventories on hand of finished goods at the beginning of the period. One very important item to be considered is the maximum of standardization to be obtained by co-operation of all departments concerned. Simplicity of unit variations being highly desirable from a planning department viewpoint. Organizations producing for stock as well as special order present a different problem to such an industry as the radio or automobile manufacturer, and fluctuating inventories of finished goods would have to be carefully watched.

A production budget once established enables the planning department in many ways to more efficiently fulfill the important duties to which it is assigned; for example—

[1] Cost and Management, Canadian Society of Cost Accountants and Industrial Engineers.

A comprehensive picture for the entire year will decide such matters as machine capacity, storeroom facilities, etc.

It enables plant executives to supply the planning department with production requirements one month actual and three months estimated, this revised monthly. This schedule can be obtained quite readily from the sales department once the routine of working to the budget has been established; also, the purchasing department finds such information invaluable in obtaining materials from suppliers.

In fact the main function of the production budget is to tell the planning department what and when to plan with a fair degree of accuracy, which I venture to say would be welcomed by a good many planning departments.

Purchase Control

The plan we have worked satisfactorily in our own plant is as follows: Material required for production is requisitioned on the purchasing department entirely from the planning department. On no occasion will the purchasing agent make a commitment for materials except on such requisitions. These requisitions are built up from bills of materials of units supplied and kept up to date by the engineering department. Our planning department has complete charge of all material activities in the plant, such as stores, receiving, internal trucking, etc., and maintains a perpetual inventory.

When a release is received for various units of production, quantities required are built up by each part used, taking into consideration the following factors:

Present stock on hand.

Orders outstanding on previous releases.

Scrap or shrinkage allowance.

Service replacement (if any).

Purchase requisitions are then drawn up showing complete description and specifications; also, date required.

Maintenance and supplies materials are requisitioned on an ordinary material required form and presented to stores. If not available they state "no stock" on requisition and forward to the planning department, who in turn issue purchase requisition. We have found this plan elimiates duplication of buying by various department heads and have been able to carry a central stock from which to supply all departments.

Purchasing responsibility commences upon receipt of purchase requisition and ceases when the material has been received in the plant.

To return to planning and control, consider for a moment these definitions:

Planning is the formulation of a programme to establish the sequence of, and provide the information for, controlling a group of activities or operations necessary for the accomplishment of a pre-determined result.

Planning is the managerial function of working out the best combination of procedures through co-ordinating the requirements with the facilities for carrying out the work of the division.

Control is the managerial function of putting these procedures into effect. The combination of planning and control forms a function, which is necessary to, and links together each of the four divisions of an organization—financial, sales, manufacturing and secretarial and accounting.

I quote these definitions from an excellent work on Planning and Control by William O. Lichtner, which I recommend to all interested in this subject.

What of this from a cost accountant's viewpoint? Just as the success of any business depends to a large degree upon proper budget control, so does the successful operation of this depend upon an efficient cost accounting system, and budgetary control is something that should be mastered by cost accountants in order to maintain their important position of painting pictures in figures of manufacturing operations.

I said earlier in my remarks that net profits were the ultimate end of all business organizations. I cannot stress too strongly the importance of profit planning and control as well as production planning, etc. Profit requirements must be planned ahead and a control of financial statements instituted to record its progress.

C. E. Knoeppel in "Factory and Industrial Management" in a series of articles on Profit Engineering discusses this feature of profit planning and I recommend your attention be given them.

I will close by reading some remarks on "Budgetary Control" given in the January 30th copy of "American Machinist" from information supplied by Thomas B. Frank, Treasurer of the Cincinnati Planer Company.

"His scratch-pad was a jumble of curlicues and figures. Try as he might, Watson Marshall could not reconcile the audit figures with the budget figures he had set down so hopefully a year before. Bad enough to have the auditors prying into every nook and cranny of the Versatile Iron Works, questioning and checking and verifying, without having them dig up a devil's brood of disappointments. Auditors would try the patience of the patron saint of all corporation presidents. Why, man, we've had the biggest year's business in our history, and here we are just one jump out of the red. He ran his fingers through his hair.

"'Bill,' he said to his friend and industrial counsellor, William Holland, 'haven't you something in your bag of tricks that you can give me? Surely you've bumped into this same kind of situation somewhere before.'

"'Certainly I have. I've been trying to give it to you for ten years at least. Every year you tell me that your business is different, and go only part of the way. Since you've been showing good black figures year in and year out, I've sometimes thought your business is different. I don't want to rub it in but it looks now as if it may not be so different. What you need is budgetary control.'

"'Budgetary control!' said Marshall, 'I've budgeted until I'm dizzy.'

"Don't deny it a bit. I'm sure you've budgeted faithfully, but I'm equally sure that you've never really utilized budgetary control. What good does it do you to set down figures when all you do is to make an annual speech about them, and file them away for comparison a year later. I know you don't exactly do that, but you permit this account and that account to get out of hand; Brady needs extra money for the shop, MacDougal needs extra money for the sales department. You've been trying to run your business on 'historical figures' alone when you really need, and need to be governed by, sound 'forecast figures.' Let me read you what this N.A.C.A. Bulletin says about budgetary control.'

A—It gives the maximum assurance of the desired profitable sales, production, and financial program.

B—It enables costs to be used for current control rather than for mere history.

C—It minimizes uneconomical uses of capital, such as:

1—Undue expansion of plant to meet temporary sales demand.

2—Inventories out of balance with sales and production requirements.

3—Unwarranted investment in work-in-process because of lack of proper production control.

4—Unrecompensed financing of customers through excessive datings of excessive storage.

5—Irregular use of plant assets on account of uneven sales demand.

D—It reduces waste through:

—Study of costs and expenses before actual costs and expenses occur.

2—Institution of wage payments based on results.

3—Assignments of responsibility for expenditures.

4—Standaridzation of machinery and processes.

E—It indicates the importance of a sound plan of organization.

F—It provides a measuring stick for actual performance; no executive is beyond the good influence of materializing his plans for the coming period, and then checking the results of yesterday's decision with today's evidence of profitable results."

What's Ahead In Industrial Marketing?*

By Bennett Chapple[1]

What's ahead in industrial marketing? Industrial executives are asking this question in earnest. Higher standards of living have raised civilization to a new plane, supported by the higher wage scale of industry. This, in turn, must be supported by an increased effectiveness of industrial marketing and selling.

It is trite to say business has undergone a complete change. High powered explosives in the form of advertising, and swifter transportation of ideas and information through periodicals, technical journals, and radio, are winning the battles of commerce. Ford makes a change in his model and the next morning all the world is talking about it. The industry that goes into the battle for trade today without modern marketing preparation hasn't a chance against the long range, rapid fire, quickly deployed selling forces of the new order. The old, respected business, which has made plenty of money in the past but is now facing dwindling sales, dwindling profits, and dwindling prospects for the future, is a pathetic figure on industry's highway.

What are we going to do about it?

First, we are going to stop making things primarily to sell and begin to make things to *serve*. There is a vast difference, for when selling is the chief motive of business, it is a case of every man for himself and the devil take the hindmost. Dealers are loaded up irrespective of possible markets. Nothing counts at the home office but sales volume, even though the cost of high pressure methods to obtain the last 25 per cent eats up all the legitimate profit of the first 75 per cent of sales. While the mind of America was concentrated on selling, all business was swept into a whirlpool of extravagance from which it is now trying to extricate itself.

The New Conception of Business

Contrast this state of affairs with the new conception of business that has taken root in the consciousness of keen business executives who are now making "service" rather than "selling" their watchword. This program is the real reason for the market analyses and analytical studies which are now demanding so much of our time. Industry is becoming professional to the extent that it studies these reports and draws its plans much as does the architect, designer, or builder, whose contribution to humanity takes a definite form of service quite aside from the levels of barter and trade. After all, the demand for facts relating to the different phases of consumption and distribution is but the search for service. This thought has helped to clarify many a weary page of statistics.

Nor is this thing called "service" confined solely to the product. It reaches farther back into the very soul of the business whence it draws its power. Older than any of the advertising slogans of The American Rolling Mill Company is the one "He lives most who serves best," which is inscribed on the inside of the signet ring worn by the company's first line executives.

I have referred to the high powered explosive of modern business, known as advertising. What about industrial advertising and its future? Unfortunately, many present day industrial executives are actually afraid of advertising. They admit they do not know much about it and "back off," showing their timidity. To make matters worse, at the first show of interest on their part, enthusiasts sweep down upon them in the name of advertising with ready-made plans to fit any and all situations.

Unquestionably thousands of dollars are wasted this way every year by industrial executives who fail to treat advertising as a vital part of their business. They like to turn it over to someone else.

The industrial executive who takes advertising seriously will give it a fair share of his time. He will either organize a competent advertising staff and carefully plan well coordinated campaigns, or he will select a good, reliable, sensible advertising counselor to do it for him. There is no mystery in advertising. It requires no trickery, no legerdemain, but a simple, straightforward logical presentation of products and their service value to the world. I stress this point because there is a tendency in some quarters for industry to climb into the lap of advertising agencies and go to sleep. It can only mean a rude awakening.

Advertising is not the only problem that is ahead of industrial marketing of the future. The question of how best to distribute the product looms very large upon the horizon. Distribution takes two channels—through jobbers or direct. Here we face many opinions and many experiences, all of which must be considered by the individual business. There is, however, a change in the jobbing situation that may help somewhat. Whereas jobbers formerly acted purely as distributing houses and prided themselves in the fact that they sold only what the public wanted and made little effort to push or sell special items, today these same jobbers have seen a great light. They are revamping their organizations to the point of becoming specialty houses.

Take the case of The American Rolling Mill Company. It believes in selected, specialized jobber distribution, and was instrumental in organizing the Armco Distributors Association, which is made up of nearly one hundred picked jobbers. Through them the sale of Ingot Iron sheets and plates is made to the sheet metal contractors of the country. It is a most satisfactory set up, both for the company and its jobbers—the volume of business is growing steadily each year.

Still another problem looms on the horizon of tomorrow. Small industries are alarmed by the gigantic mergers that are taking place. They see in them something ominous, but is the fear justified? There will always be a place for the small industry, because by its very size it can respond quickly to the changing needs of the industrial world. Alive, alert and trained to a quick getaway in the race for markets, there will be always a place for the thoroughbred. The world is looking constantly for the newer things offered by creative genius, either in science, mechanics, or merchandising.

Coordinated Service

The American Rolling Mill Company's national advertising policy has been unique in that it is designed to reach over the immediate market and help sell the products of fabricators. The building of a consciousness of a rust-resisting quality iron in the minds of the consuming public is just one more picture of the possibilities of a broadly conceived, coordinated service, for today hundreds of smaller manufacturers who cannot afford national advertising are taking advantage of the Armco campaign as a profit and prestige building force. Manufacturers of kitchen ranges, refrigerators, washing machines and many other unit sales. A group of related pieces of merchandise cannot easily be arranged on an open table. A pile of one type of article is usually the case in such a display, and the larger opportunity to stimulate a desire for several items is lost. In contrast, a pleasingly arranged group of items, such as an ensemble clothing display, will create an impulse that may lead to the purchase of several or all of the items in the exhibit and thus the sales check will be materially increased. Quoting a prominent retail authority on this point:

"It is impossible to estimate how much business is lost each year through failure to sell things that customers want but have forgotten. Probably one-third could be added to the volume of any store."

* Executive Service Bulletin.
[1] Vice-Pres., the American Rolling Mill Co.

It is well to keep in mind these aspects determining the type of display that is to be made.

News Value in Display

Display can also be advantageously utilized in building up the "personality" of a store. This is an era of style and style influence. It is likewise the era of the tabloid news sheet, whose success is dependent upon a concise and pictorial presentation of the news of the day. These are both characteristics of the age in which we live that may be borne in mind with profit by the merchant planning his store display. The resourceful executive will capitalize the news value of style to attract interest to his store and to his merchandise. Style exhibits, well planned, properly displayed, prominently placed, and frequently changed will become for the merchant his tabloid news sheet, presenting in arresting form the latest style trends so that "he who runs may read." By means of such exhibits, the store will enhance its personality in the minds of its customers and add to the good will that its organization must constantly aim to build up. These selling messages must, obviously, be given the most prominent positions in the store, since they are the eye-catchers that will engage the interest of the prospective customers. They may also be placed in awkward corners, not otherwise utilized, or employed to enliven unattractive or uninteresting departments.

Many Opportunities Open

Many opportunities are open to the retailer who is alert to the possibilities of the various types of display. There has been space here to suggest but a few of these. Properly utilized, merchandise display becomes an adjunct to retailing that is of the greatest importance. It can play an invaluable role in building up the attractiveness of a store, in avoiding the mark-down of goods, and in increasing the sales unit.

Progress in the Kraft Situation

Evidence of the way in which the kraft industry is tackling its problems is seen in a recent meeting in New York of the committee of the industry, appointed as result of joint conference between the national and southern kraft associations.

Two very definite results were achieved at this meeting, the first being a unanimous recognition of the necessity of operating to orders, and the second, a move to obtain complete kraft statistics, covering both paper and board. It is expected that these data will be developed through the combined cooperative efforts of the National Kraft Association, the Southern Kraft Association, and the American Paper and Pulp Association.

Further meetings of this committee will be held at early dates under the chairmanship of Clark Everset. Meanwhile, the members of the committee are studying the various plans for effecting the economic stabilization of the industry as discussed at the committee's first meeting.

It would appear that the recent improvement in the kraft wrapping situation was as welcome to the merchants as to the manufacturers, as presaging further efforts towards complete stabilization of the industry in all of its related branches. More than seasonal demand is reported by many of the mills, all of which are evidently willing to help the committee of the industry in every possible way in its difficult task of developing plans for some control of the condition of competition now seemingly existent in many of the branches of the kraft industry.

The work of this representative committee of the industry only serves to emphasize the value of unified and coordinated effort to overcome conditions, which, in themselves, present almost insurmountable difficulties to individual units regardless of the zeal of those units in pushing effort to improve conditions. The results of the committee's work will be watched with interest not only by kraft manufacturers and merchants, but also by other branches of the industry whose position has been somewhat affected by the kraft situation.

Glazed and Fancy Paper Manufacturers Meet

The quarterly meeting of the Glazed and Fancy Paper Manufacturers Association was held at the Hotel Kimball, Springfield, Mass., October 7, 1930. From the point of view of member attendance and business transacted, it was one of the best meetings ever held by this association. President John B. Van Horn, of the Holyoke Card and Paper Company, presided at the meeting of the executive committee held in the morning, and at the luncheon and meeting held later.

The problem of developing a schedule of quantities for price differences was discussed. Out of 21 schedules reported by members, 17 were different. The matter was left with the secretary, Leonard I. Houghton.

Arlington G. Post, of the National Coated Paper Corporation, Pawtucket, R. I., was elected to the executive committee to fill the vacancy caused by the death of Mr. Alfred S. Guggenheimer. The election of two new members—G. R. Whiting, Inc., of Newark, N. J., and the Metz Paper Company, of Pawtucket, R. I., was approved.

After the luncheon, Frederick J. Hillman, the executive vice-president of the Springfield Chamber of Commerce, spoke briefly about requirements for successful business administration. After outlining the nation's present business situation and the things which have lead up to this situation, he pointed out that, in order to succeed in these days, an organization must have executives with knowledge of economics, complete budgetary control, detail cost facts, and a perfected organization of personnel.

The reorganization committee, whose tentative report was received at the previous meeting, made a final report. It was voted that one meeting per year be entirely a social meeting, and that members include on their printed matter some expression of the fact that they belong to the Glazed and Fancy Paper Manufacturers Association.

The following resolution, on the death of Mr. Alfred S. Guggenheimer of the United Manufacturing Company, was adopted:

"For many years Mr. Alfred S. Guggenheimer has been an active worker and officer in the Glazed Fancy Paper Manufacturers Association. In his death the association suffers a great loss.

"Be it therefore resolved, that we express in this manner our sorrow in his death, and our sympathy to his family.

"Be it further resolved that these resolutions be spread upon the minutes, and a copy sent to his family."

The conference committe, John Shuart, chairman, Springfield Glazed Paper Company, reported that they were to have a meeting on October 9 with the committee from the National Paper Box Manufacturers Association.

The next meeting of the Glazed and Fancy Paper Manufacturers Association will be held in New York City, Tuesday, December 2.

New Strainer Catalog Issued

Schutte & Koerting Company, of Philadelphia, have just published a new bulletin describing the S. & K. line of strainers for oil, steam, water, etc. The booklet is profusely illustrated and the advantages obtained by the use of strainers in oil lines, steam mains, suction pipes, etc., are explained in such a manner that the selection of the proper type of strainer is practically automatic.

Japanese Paper Production Decreases

WASHINGTON, D. C., November 5, 1930.—Paper production in Japan by the member mills of the Japanese Paper Manufacturers' Association, during the eight months ended August 31 totaled 461,602 short tons and sales were 437,742 tons, a decrease in the case of the former figure of 10,929 tons and in the latter of 18,614 tons compared with the corresponding period of last year.

Wood Tanks

are not Corrodible

Half-Round Stuff Chests made of 3-inch Genuine Red Gulf Cypress with heavy Yellow Pine bracing. Built and erected in the Frank Smith Paper Mill at Middletown, Ohio.

The Hauser-Stander Tank Company
Cincinnati Ohio

Wood tanks for every purpose in the paper mill, accurately made and only the best material and workmanship are used in their construction.

Sulphur

A FIRST REQUISITE

in

Paper Making

Large Production
Ample Reserves
Prompt Deliveries
Purity 99½%

TEXAS GULF SULPHUR CO
(Incorporated)
75 East 45th Street, New York City
Mine: Gulf, Matagorda County, Texas

Helping to Keep Production Uniform

Due to their dependability and fineness of control, Mason Pressure Regulators are being used more and more on the power and process lines in Pulp and Paper Mills where absolute uniformity of product is stressed.

Their extremely sensitive action responds instantly to changes of pressure and steam demand, yet they are ruggedly built to withstand high velocity conditions.

Mason engineers will be glad to offer practical suggestions on any pressure control problems you may have. Just write to

MASON REGULATOR CO.,
1190 Adams St.,
Dorchester Centre Station,
BOSTON, MASS.

MASON REGULATOR CO., LTD.,
686 Notre Dame St., West,
Montreal, Quebec, Canada.

Blake, Moffitt & Towne 75 Years Old

Founded in San Francisco in 1855, the Pioneer Paper firm of Blake, Moffitt & Towne is this year celebrating its 75th Anniversary. It is today one of the largest as well as the oldest wholesale jobing organizations in the country—maintaining Divisions in seventeen of the principal cities of the Pacific Coast.

The founders of the Company were Francis Blake, James Moffitt and James W. Towne. Each one had been in the printing business on the East Coast before coming West and although they came separately and by various routes met and subsequently formed the business institution which bears their name. Both Blake and Moffitt arrived during the Gold Rush Days of 1849 and after trying their luck in the mines found their way back to San Francisco where they formed the partnership of Blake & Moffitt, Printers. This was in 1885 and marks the beginning of a commercial enterprise which has continued since that time.

James W. Towne came by Panama, arriving in 1852. Whitton, Towne & Company was the name of the old printing establishment he helped to form, later known as Towne & Bacon. Many of the rare old Pioneer books of the day bear the imprint of this house, including among others Bret Harte's first book of poems, "The Lost Galleon". The firm had an interest in "The San Francisco Bulletin," which was started by C. A. Gerberding and James King of William and for some time following its start in October, 1855, was regularly printed by Whitton, Towne & Company.

In 1858 James W. Towne left San Francisco and went to Victoria, for a time, where he founded the first newspaper in British Columbia, known as the "Victoria Gazette". This was during the period the Fraser River "Boom", when gold had been discovered, and people from California flocked North in large numbers to the scene of the new "diggings".

During the Pioneer period all of the larger printing plants in San Francisco found it necessary to import their paper requirements from the East. Year by year this phase of the business grew in volume and importance, until, in 1868, Blake, Robbins & Company, Paper Dealers, was formed consisting of four partners Francis Blake, James Moffitt, James W. Towne and Charles F. Robbins.

The paper business prospered, and expansion followed. A complete paper bag manufacturing plant was installed and the whole Pacific Coast was the market for Blake, Robbins Bags. The first branch of the Company was established in 1883 at Portland, Oregon—the first of what has since developed into a chain of seventeen Divisions.

Upon the death of Mr. Robbins in 1884, the partnership of Blake, Robins was dissolved and the corporation of Blake, Moffitt & Towne took its place on January 1st, 1885. Here, then is the beginning of the firm name as we know it today—a name which this year is 45 years old, but an institution which began 75 years ago when the presses of Blake & Moffitt first started turning in 1855.

There followed three years of progress, when in 1888 the firm was shocked by the sudden death of Mr. Blake. James Moffitt was elected to fill the vacancy in the office of President and the other officers included two young men of the second generation, Arthur G. Towne, Secretary-Treasurer; and James K. Moffitt, Vice-President.

When in 1891 Blake, Moffitt & Towne established its Los Angeles Division, James K. Moffitt was placed in charge. He subsequently left the paper business to accept a position in the First National Bank of San Francisco—Now the Crocker First National Bank of which he is at present Chairman of the Board. He has always, however, maintained an active interest in the affairs of the Corporation and today serves as its president.

Succeeding him as Manager of Los Angeles was E. M. Greppin, whose marked ability in the field of paper merchandising soon placed the firm in a leading position in the rapidly growing Los Angeles territory. Today this Division of Blake, Moffitt & Towne boast one of the largest and most modernly equipped paper warehouses in the country.

In October, 1906 James Moffitt, the founder, and then President of the Company, died. His loss was keenly felt throughout the business life of the West where his interests were many and varied.

Arthur G. Towne eldest son of the founder, James W. Towne, now became President of the Company. Upon his shoulders fell the work of rebuilding following the San Francisco Fire of 1906. immediately following the disaster, a temporary location was used in Oakland, and later adequate quarters were secured in San Francisco, first in the wholesale and shipping area known as China Basin, and then in 1911, a move was made to the newly constructed building at 41 First Street which remains today the Headquarters of the Parent Division.

Recent years have witnessed a great period of expansion of this Pioneer Paper Organization. Besides the Division early established at Portland, Oregon, and at Los Angeles, others were opened in such important market centers of the Pacific Coast as Seattle, Tacoma, San Diego, Sacramento, Oakland, Fresno, San Jose, Long Beach, Phoenix, Tucson, Boise, Medford and Salem.

This year, the 75th Anniversary, has been marked by special activity in the opening of new and modern buildings for the San Diego and Oakland Divisions and the establishment of a new house at Yakima, Washington. Opened in June of this year this most recent location completes the chain of 17 which serves the Paper Buyers of the Pacific Coast.

Today the parent organization with Headquarters in San Francisco is headed by James K. Moffitt, President, who succeeded A. G. Towne when, several years ago, ill-health forced his retirement. Associated with Mr. Moffitt as officers of the Company are James W. Towne, First Vice-President, F. M. Couch, and E. A. Doran, Vice-Presidents, and W. B. Maxwell, Secretary-Treasurer. Mr. Couch has for a number of years been Manager of the Los Angeles Division, while Mr. Doran is in charge of Sales and Purchasing activities at San Francisco as well as acting as head of the Arizona organization. Mr. Maxwell has just completed his 45th year with the Company, while James W. Towne, son of Arthur G. Towne, is a representative of the third generation in the active service of the organization.

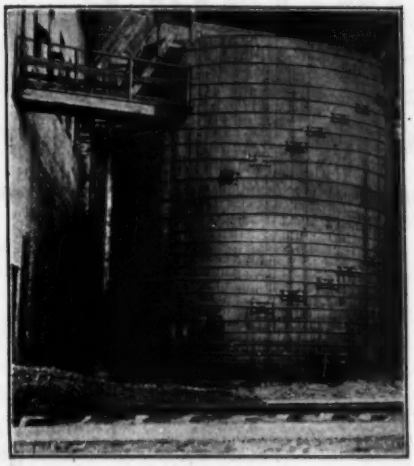
In the Pacific Northwest O. W. Mielke is in charge of the Company's interests, serving as President of both Oregon and Washington Corporations. At Seattle, J. W. Thompson is the manager, and at Tacoma, F. E. Jeffries.

Blake, Moffitt & Towne is a concern which has enjoyed the respect and good will of the trade because of its fair dealing and quality merchandise. The lines handled include printing and wrapping papers, paper products, fruit papers, twines and cordage.

Glens Falls Machine Works Active

GLENS FALLS, N. Y., November 3, 1930.—Development of the Glens Falls Machine Works has been rapid in recent years and the papermaking machinery turned out at the local plant has won the approval of its customers in all sections of the country. The concern has concentrated more recently on its foreign business with the result that it is now catering to a large trade in the Norwegian countries, England and other sections of Europe. Very recently the firm completed large orders for countries in the Far East and it is said that more contracts will soon be placed from that source. The company manages to maintain capacity schedules in its plant virtually at all times and its engineering departments are regarded as if the highest from an efficiency standpoint.

TANKS THAT LAST



Acid tank at Nekoosa-Edwards Paper Company, Pt. Edwards, Wis.

Kalamazoo tanks are made of best obtainable tank woods, built right, guaranteed tight.

Sixty years experience building Blow Pits, Acid Tanks, Stuff Chests, Agitators, etc., for the Paper Trade.

Ask about our new Tile Tanks for stock or bleach.

Kalamazoo Tank & Silo Co., Kalamazoo, Mich.

Aids to the Paper Maker

Removing the *"Beard"*

Fuzz is objectionable on all printing papers. It fills up the type and causes blurred impressions.

Reduce any complaints on your paper by eliminating fuzz with P.Q. Silicate of Soda. The addition of P.Q. Silicate to the beater for this purpose is established practice for such papers as bristols, offset, cover, book, label, mimeograph, writing, lithograph.

Read the statements of other mills on their experiences with silicate as an eliminator of surface fuzz. Without obligation, we shall be glad to furnish you a set of these reports.

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General Offices and Laboratory

121 S. Third St., Philadelphia

Chicago Office: 205 W. Wacker Drive

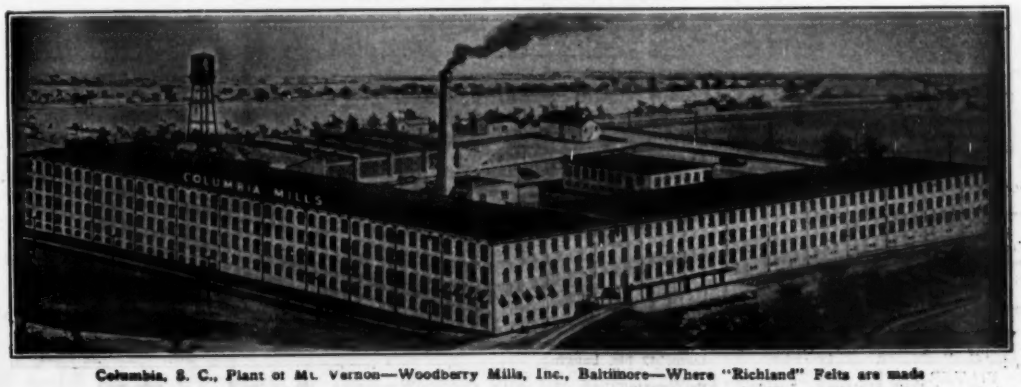
Eight plants and distributors in forty-five cities

COTTON DRYER FELTS

"Mt. Vernon" Standard Weave
Medium—Standard—Extra Heavy
Widths 36" to 164"

"Richland" Triplex Weave
Widths 68" to 210"

Felts within the above ranges made in lengths as required



Columbia, S. C., Plant of Mt. Vernon—Woodberry Mills, Inc., Baltimore—Where "Richland" Felts are made

Orders must be placed sufficiently in advance to insure satisfactory delivery

TURNER, HALSEY COMPANY

74 Leonard Street, New York

Sole Selling Agents for

MT. VERNON—WOODBERRY MILLS, Inc.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING NOVEMBER 1, 1930

SUMMARY

Cigarette Paper .....156 cs.
Wall Paper .....22 bls., 5 cs.
Paper Hangings .....6 bls., 5 pkgs., 4 cs.
News Print .....33 bls., 1,799 rolls
Printing Paper .....193 cs.
Wrapping Paper .....6 bls.
Filter Paper .....3 cs.
Gold Coated Paper .....3 cs.
Coated Paper .....3 cs.
Writing Paper .....12 cs.
Colored Paper .....13 cs.
Decalcomania Paper .....4 cs.
Detail Paper .....8 cs.
Bowl Paper .....20 bls.
Envelopes .....4 cs.
Writing Paper and Envelopes .....3 cs.
Carbon Paper .....4 cs.
Litmus Paper .....1 cs.
Stencil Paper .....1 cs.
Wafer Paper .....10 cs.
Straw Paper .....52 bls.
Miscellaneous Paper .....17 bls., 252 rolls, 133 cs.

CIGARETTE PAPER

P. J. Schweitzer, Pr. Adams, Marseilles, 112 cs.
Standard Products Corp., De Grasse, Havre, 44 cs.

WALL PAPER

F. J. Emmerich, Adriatic, Liverpool, 15 bls., 1 cs.
A. C. Dodman, Jr., Inc., Majestic, Southampton, 7 bls.
——, N. Amsterdam, Rotterdam, 3 cs.
——, Mauretania, Southampton, 1 cs.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., Adriatic, Liverpool, 4 bls.
W. H. S. Lloyd & Co., American Farmer, London, 5 pkgs.
Whiting & Patterson Co., Inc., Majestic, Southampton, 1 cs., 1 ble.
Whiting & Patterson Co., Inc., Mauretania, Southampton, 1 cs., 1 ble.
R. F. Downing & Co., De Grasse, Havre, 2 cs.

NEWS PRINT

J. Madden Corp., Karlsruhe, Bremen, 284 rolls.
Perkins Goodwin & Co., Karlsruhe, Bremen, 43 rolls.
——, T. Fagelund, Port Alfred, 1,439 rolls.
Lunham & Reeve, Inc., Malaren, Kotka, 391 rolls, 33 bls.
Stora Kopperberg Corp., Gripsholm, Gothenburg, 314 rolls.
——, Stavangerfjord, Oslo, 328 rolls.

PRINTING PAPER

T. N. Fairbanks Co., Pr. Adams, Genoa, 59 cs.
F. C. Strype, N. Amsterdam, Rotterdam, 30 cs.
E. Dietzgen & Co., N. Amsterdam, Rotterdam, 64 cs.
Borden Riley Paper Co., N. Amsterdam, Rotterdam, 40 cs.

WRAPPING PAPER

Eastchester Paper & Cordage Co., Gripsholm, Gothenburg, 6 bls.

FILTER PAPER

E. Dietzgen & Co., American Farmer, London, 3 cs.

GOLD COATED PAPER

F. Murray Hill Co., Karlsruhe, Bremen, 3 cs.

COATED PAPER

W. A. Foster & Co., American Farmer, London, 3 cs.

WRITING PAPER

Thomas & Pierson, Majestic, Southampton, 1 cs.
Guibout Freres, Majestic, Southampton, 2 cs.
Distinctive Writing Paper Co., Majestic, Southampton, 7 cs.
Japan Paper Co., De Grasse, Havre, 2 cs.

COLORED PAPER

C. A. Brown, Karlsruhe, Bremen, 12 cs.
F. L. Kramer, Karlsruhe, Bremen, 1 cs.

DECALCOMANIA PAPER

Phoenix Shipping Co., Karlsruhe, Bremen, 4 cs.

DETAIL PAPER

Globe Shipping Co., Karlsruhe, Bremen, 8 cs.

BOWL PAPER

Hurley Johnson Corp., Adriatic, Liverpool, 20 bls.

ENVELOPES

H. Reeve Angel & Co., Inc., American Farmer, London, 4 cs.

WRITING PAPER AND ENVELOPES

B. Altman & Co., Mauretania, Southampton, 3 cs.

CARBON PAPER

W. J. Byrnes, Mauretania, Southampton, 4 cs.

LITMUS PAPER

Pfalz & Bauer, Kifuku Maru, Hamburg, 1 cs.

STENCIL PAPER

W. L. Newberry, Majestic, Southampton, 1 cs.

WAFER PAPER

B. L. Haas, N. Amsterdam, Rotterdam, 10 cs.

STRAW PAPER

American Express Co., Kifuku Maru, Hamburg, 52 bls.

MISCELLANEOUS PAPER

Keller Dorian Paper Co., Pr. Adams, Marseilles, 7 cs.
P. H. Petry & Co., Gripsholm, Gothenburg, 114 rolls.
Walker Goulard Plehn Co., Gripsholm, Gothenburg, 138 rolls.
W. J. Byrnes, Majestic, Southampton, 2 cs.
Heemsoth Basse & Co., N. Amsterdam, Rotterdam, 9 bls.
T. Tiedeman & Son, N. Amsterdam, Rotterdam, 8 bls.
Globe Shipping Co., N. Amsterdam, Rotterdam, 15 cs.
Steiner Paper Corp., N. Amsterdam, Rotterdam, 4 cs.
Corn Exchange Bank, Kuma Maru, Kobe, 25 cs.
——, Kuma Maru, Kobe, 10 cs.
F. C. Strype, Kuma Maru, Yokohama, 10 cs.
Devoe & Reynolds, De Grasse, Havre, 8 cs.
J. Beckhard, De Grasse, Havre, 4 cs.
Keller Dorian Paper Co., De Grasse, Havre, 13 cs.
Keller Dorian Paper Co., Mauretania, Southampton, 5 cs.
Japan Paper Co., Tai Ping, Yokohama, 30 cs.

RAGS, BAGGINGS, ETC.

Castle & Overton, Inc., United States, Copenhagen, 42 bls. new cuttings.
Standard Bank of South Africa, United States, Copenhagen, 17 bls. rags.
Baring Bros. & Co., Cameronia, Glasgow, 197 bls. paperstock.
T. D. Downing & Co., Cameronia, Glasgow, 98 bls. bagging.
Darmstadt Scott & Courtney, Explorer, Genoa, 40 bls. bagging.
Baring Bros. & Co., London Exchange, London, 60 bls. rags.
Chemical Bank & Trust Co., Kuma Maru, Osaka, 20 bls. rags.
Atlantic National Bank, Kuma Maru, Osaka, 50 bls. rags.
E. Butterworth & Co., Inc., Wytheville, Antwerp, 47 bls. bagging.
E. J. Keller Co., Inc., Eberstein, ——, 110 bls. flax waste.

OLD ROPE

Brown Bros. & Co., Alfonso XIII, Coruna, 54 coils.

CHINA CLAY

——, New York City, Bristol, 440 bags.

WOOD FLOUR

State Chemical Co., N. Amsterdam, Rotterdam, 1,200 bags.
Hoboken Trust Co., N. Amsterdam, Rotterdam, 200 bags.
B. L. Soberski, Tonsbergfjord, Frederickstad, 675 bags.

WOOD PULP WADDING

Bendix Paper Co., N. Amsterdam, Rotterdam, 50 bls.

WOOD PULP

Atterbury Bros., Inc., United States, Oslo, 500 bls. wood pulp, 100 tons
Lagerloef Trading Co., Malaren, Kotka, 160 bls. sulphite.
E. M. Sergeant & Co., Gripsholm, Gothenburg, 449 bls. kraft soda pulp.
Perkins Goodwin & Co., Gripsholm, Gothenburg, 26 bls. wood pulp.
J. Andersen & Co., Tonsbergfjord, Greaker, 2,660 bls. sulphite.
J. Andersen & Co., Kifuku Maru, Hamburg, 252 bls. wood pulp, 49 tons.
Johanson Wales & Sparre, Inc., Kifuku Maru, Hamburg, 504 bls. sulphite, 75 tons.
Harriman Bros., Kifuku Maru, Hamburg, 400 bls. wood pulp, 60 tons.
E. J. Keller Co., Inc., Kifuku Maru, ——, 344 bls. wood pulp, 51 tons.
J. Andersen & Co., Stavangerfjord, Sarpsborg, 150 bls. sulphite.
Atterbury Bros., Inc., Stavangerfjord, Oslo, 500 bls. wood pulp.

PULPWOOD

Chase National Bank, Ousebridge, Archangel, 4,235 cords.

WOOD PULP BOARDS

Lagerloef Trading Co., Malaren, Kotka, 219 bls.
H. Fuchs & Son, Gripsholm, Gothenburg, 48 bls.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 1, 1930

Lagerloef Trading Co., Malaren, Wiborg, 17,089 bls. sulphite; 450 bls. sulphate.
Lagerloef Trading Co., Malaren, Kotka, 360 rolls wood pulp boards; 234 bls. wood pulp boards; 1,134 bls. sulphite; 508 bls. sulphate.
National City Bank, Kuma Maru, Kobe, 145 bls. rags.
——, Kuma Maru, Yokohama, 100 bls. rags.
J. A. Steer & Co., New York City, Bristol, 75 coils old rope.
F. Weber & Co., Wytheville, Antwerp, 9 cs. paper.
S. E. Ingber, Wytheville, Antwerp, 69 bls. rags.
F. Stern, Wytheville, Antwerp, 51 bls. rags.
Katzenstein & Keene, Inc., Wytheville, Antwerp, 106 bls. rags.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 1, 1930

Chase National Bank, Wytheville, Antwerp, 28 bls. rags.
E. Butterworth & Co., Inc., Wytheville, Antwerp, 51 bls. bagging.
Jordan Marsh & Co., Wytheville, Antwerp, 4 cs. writing paper.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 1, 1930

Lagerloef Trading Co., Malaren, Wiborg, 3,798 bls. sulphite.
Lagerloef Trading Co., Malaren, Kotka, 310 bls. sulphite; 254 bls. wood pulp.
Congoleum Nairn Co., Explorer, Genoa, 771 bls. rags.
National City Bank, Explorer, Marseilles, 170 bls. rags.

NORFOLK IMPORTS

WEEK ENDING NOVEMBER 1, 1930

E. J. Keller Co., Inc., Binnendyk, ——, 51 bls. rags.

Union Screen Plate Company

Fitchburg, Mass., U. S. A. Lennoxville, P. Q., Canada

UNION BRONZE

SCREEN PLATES FOR FLAT SCREENS
6 SLOTS—5 SLOTS—4½ SLOTS—4 SLOTS—PER INCH

[redacted]

Old Plates Reclosed and Re-cut to Accurate Gauge
Rolled Phosphor Bronze and Copper Plates for Rotary Screens

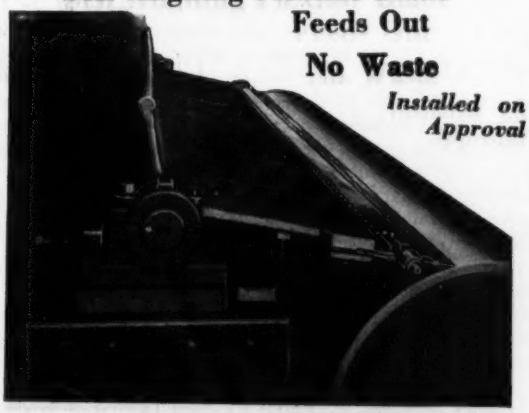
Sole Manufacturers of the Union Witham Screen Plate Vat and Fastener

NO LEAKS — NO STREAKS

with the

New Lodding Press Doctor

Self Aligning Flexible Blade
Feeds Out
No Waste
Installed on Approval



EACH BLADE GUARANTEED TO FIT—AND GIVE AT LEAST 6 MONTHS SERVICE

LODDING ENGINEERING CO.
WORCESTER, MASS.

1864 1930

"EXCELSIOR" FELTS

for every grade of

PULP AND PAPER

We continue to maintain at the top the quality of Excelsior Felts, as we have done since we, as pioneers, made the first endless paper machine felts manufactured in America.

Seamless felts for fast running.
Satin Style felts for finish.
Special felts to meet every condition.
Send us your felt problems.

KNOX WOOLEN COMPANY
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BULKLEY, DUNTON & COMPANY
75-77 Duane St., N. Y., and direct

WOOD PULPS

All Grades

CHICAGO OFFICE:
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111 West Washington St.

Acer, McLernon & Company Limited

CANADA CEMENT BUILDING
MONTREAL, P. Q.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, November 5, 1930.

Business in the local paper market during the last week went forward at a seasonal pace, with shipments being made in satisfactory quantities. Prices remain at approximately the same levels, generally, with a slight falling off in certain grades.

Shipments of news print exceeded production for the week, with prices as previously scheduled.

Book and bond papers remain unchanged, and demand remains fairly satisfactory. A quiet condition prevails in board mill products, while in coarse papers prices vary somewhat.

Mechanical Pulp

The ground wood pulp market shows little change. Shipments are going forward steadily, and some interest is shown in quotations for future shipment.

Chemical Pulp

A rather quiet condition continues in the market for chemical pulp, and despite keen competition the prices hold to former levels. It is expected that the coming weeks will show increased demand.

Old Rope and Bagging

Trading in the market for old rope and bagging was reasonably active in most grades, although demand and prices have not shown any great variation.

Rags

Slightly increased demand for domestic rags is noted in the market at present, with cotton cuttings going well and roofing stock continuing fairly active. Steady prices rule in this market, and no unusual transactions have taken place in the imported rag market.

Waste Paper

The higher grades of waste paper remain firm and in good demand, particularly hard white and soft white. Book stock remains about the same, with some lowering of price on the lower grades.

Twine

Demand for twine in the New York market is quite steady, while prices are holding to somewhat lower levels than formerly. The holiday business in the offing tends to increase activity in the twine market. The simplification program adopted by a group of twine manufacturers has eliminated unnecessary duplication of terms and quotations.

Merchants' Association Year Book Out

With the publication of the 1930 Year Book of the Merchants' Association of New York, one of the most valuable trade directories that is published in this city has again made its appearance. This book is now being distributed to members of the association, consular officers of the United States wherever they are located, leading commercial organizations in the United States, and numerous trade organizations abroad. In addition to the reports covering the activities of the Merchants' Association for the year ended April 30, 1930, the Year Book contains alphabetical and classified lists of the enrollment as of August 23, 1930—a total of more than 7,000 names.

Laboratory Resumes Container Courses

The Forest Products Laboratory's demonstration courses in boxing and crating, suspended since the spring of 1929 on account of the crowded condition of the research program, will be resumed in January, according to announcement from C. P. Winslow, director of the Laboratory. The course, the thirty-third to be given at the federal laboratory, will open January 12 and close on January 17.

Developments in the line of container research since the last short course in boxing and crating have made it necessary to considerably revise the program of instruction. Within the last two or three years the container laboratory staff has carried on intensive studies of the transportation hazards of handling and car movement that had hitherto been subordinated to researches on container design and construction. The results of the transportation hazards study have been noteworthy and consequently will be offered to the next class of men coming to Madison.

As in the past, the other matters that will be taken up in the course include tests to show the advantages and limitations of different styles of nailed wooden boxes, of wirebound boxes, and of fiber boxes; tests to show the importance of adequate nailing, effect of varying number of pieces in sides, top, bottom, and ends, advantages of hardwood ends and cleats, effect of using green lumber, and advantages of metal strapping; tests of crates to show best types of construction for various loads.

A limited amount of inspection and consultation on containers submitted by men taking the course will be offered. Tests of such containers will be made if time permits and if results to be obtained appear to be of general interest to the class. Containers should not be forwarded, however, until the matter has been taken up with the Laboratory.

Inquiries regarding the Forest Products Laboratory boxing and crating course should be sent to the Director, Forest Products Laboratory, Madison, Wis.

C. B. Griffin New Head of Carew Mfg. Co.

At a meeting of the board of directors of the Carew Manufacturing Company held on Thursday, October 30, the following resolutions were adopted:

RESOLVED, that the board of directors of the Carew Manufacturing Company desire to give permanent expression to their keen sense of personal as well as business loss in the death of William Dwight Judd, president and director of this company for over twenty-four years.

His kindliness and great personal charm, as well as his integrity and ability, endeared him to the hearts of his business associates not only in this company but throughout the paper trade as a whole.

At the same meeting, Courtlandt B. Griffin was elected president and George E. Bardwell, director to fill the vacancies caused by the death of Mr. Judd.

Mr. Griffin is a grandson of John H. Southworth, a former president, and a son of Solomon Bulkley Griffin, vice-president for many years up to the time of his death in 1925.

Mr. Bardwell, the present treasurer, has been associated with the company for almost twenty-five years, first as sales manager and for the last five years as treasurer.

West Virginia Pulp and Paper Company

Manufacturers of

SUPERCALENDERED and MACHINE FINISHED BOOK and LITHOGRAPHIC PAPERS

Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

also

Bleached Spruce Sulphite and Soda, Kraft Pulp

230 Park Ave. New York — 35 East Wacker Drive Chicago

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SOLVAY PRODUCTS

SODA ASH
CAUSTIC SODA

Liquid Chlorine

Contract or Spot Delivery
In tank cars and multiple unit cars.

Write for Prices

SOLVAY SALES CORPORATION
Alkalies and Chemical Products Manufactured by The Solvay Process Company

61 Broadway, New York — Boston, Syracuse, Chicago, Indianapolis, Cleveland, Cincinnati, Pittsburgh, Detroit, Philadelphia, Kansas City, St. Louis, Atlanta

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WOOD PULP AGENTS

PRICE & PIERCE, Ltd.,

17 EAST 42ND ST.
NEW YORK

ALLIGATOR
STEEL BELT LACING
Scientific Joining
Alligator Steel Belt Lacing holds the belt in a vise-like compression grip. Prevents ply separation at belt ends. The smooth flexible joint is reliable in service and has great surplus strength. It rocks on oval faces of the sectional hinge pin.
Quickly and Easily Applied with only a Hammer
Combines the efficiency of an endless belt and the convenient take-apart feature. In general use on light, medium and heavy belts of all types. Made also in "monel metal". Eleven sizes. Sold the world over.
FLEXIBLE STEEL LACING COMPANY
4689 Lexington Street Chicago, Illinois
In England at 135 Finsbury Pavement, London, E. C. 2
To avoid imitations look for the Alligator on the yellow labeled box and stamped on the lacing.
NEVER LETS GO

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, November 5, 1930.

BLANC FIXE.—Conditions in the market for blanc fixe remain firm. Quotations on the pulp hold at from $42.50 to $45.00 per ton, with powder quoted at 3¾ to 4½ cents per pound, at works, in barrels. Fairly active demand is noted for both powder and pulp.

BLEACHING POWDER.—Moderately steady prices obtain in the bleaching powder market, with late quotations from $2.00 to $2.35 per 100 pounds, in drums, at works. Movement of shipments on contract go forward at a good pace for the season.

CASEIN.—Continued improvement is noted in casein demand. Prices are 10 cents for domestic standard ground, with finely ground quoted at 12½ cents per pound. The Argentine standard ground sells at 12 cents, while finely ground is quoted at 12½ cents per pound, car lot quantities, in bags.

CAUSTIC SODA.—Demand for caustic soda holds good, with prices for the solid quoted at $2.85 to $2.90, with ground and flake selling for $3.25 to $3.30 per 100 pounds, at works, in large drums.

CHINA CLAY—Normal trading continues in the china clay market, with seasonal shipments against contract. No changes are announced in prices, which remain at from $15 to $25 per ton, ship side, for the imported grades, with the domestic paper making clay holding at $8 to $13 per ton, at mine.

CHLORINE.—Paper mill requests for chlorine continues fairly strong, with the contract season in prospect, and prices holding at the same level. Quotations are from $2.35 to $2.40 per 100 pounds, in multi-unit cars, or tanks, in ton lots or more, at works.

ROSIN.—Firmer prices are current in the rosin market, with gum rosin for paper mill use quoted at from $5.45 to $5.55 per 280 pounds, in barrels, at yard. Offerings of wood rosin are priced at $4.66 per 280 pounds, in car lots, at works.

SALT CAKE.—Slightly increased activity prevails in the market for salt cake, and good quantities are going forward to consumers. Quotations are now being made at from $17 to $18 per ton, with chrome salt cake at from $16 to $17 per ton, at works, in bulk.

SODA ASH.—The market for soda ash continues stronger, with schedule prices remaining in force. Recent contract quotations are $1.32 in bags, $1.50 in barrels, per 100 pounds, in car lots, at works.

STARCH.—Previous quotations on starch hold steady, with supplies moving into consumption in fair volume. Special starch for paper making sells at $3.62 per 100 pounds, in bags, or at $3.89 in barrels.

SULPHATE OF ALUMINA.—Business in the market for sulphite of alumina remains good, with demand steady. Iron free is selling at from $1.95 to $2.00 per 100 pounds, in barrels, at works, while commercial grades go for $1.45 to $1.50.

SULPHUR.—Schedule prices prevail in the sulphur market, with fairly persistent demand. Quotations are at $18 per ton, at mine, on contract for 1,000 tons or over, and at $20 per ton for smaller quantities. Nearby and spot carloads are quoted at $21 per ton.

TALC.—Supplies of talc go forward at a seasonal rate, with no change in prices. Domestic grades are quoted at from $16 to $18 per ton, in bulk, with the imported talc price remaining at from $18 to $20 per ton, ship side, in bags.

Starts New Machine in Gill Div.

HOLYOKE, Mass., November 4, 1930.—For the first time for nearly three years a machine in the George C. Gill Division of the American Writing Paper Company, Inc. is turning out paper, the machine that supplanted the big one sold now being in operation. The work at the Windsor Division of the Company will be now done on this machine. Dwight Bartlett has been appointed to have charge of the Gill mill.

Market Quotations

Paper
(F. o. b. Mill)

Ledgers	11.00 @ 38.00
Bonds	9.00 @ 53.25
Writings—	
Extra Superfine	14.00 @ 32.00
Superfine	14.00 @ 32.00
Tub sized	10.00 @ 15.00
Engine sized	8.00 @ 11.00
Book, Cased—	
S. & S. C.	6.00 @ 7.50
M. F.	5.75 @ 7.00
Coated and Enamel	7.50 @ 12.00
Lithograph	7.50 @ 12.00
Tissues—Per Ream—	
White No. 1	.65 @ .67½
Anti-Tarnish M G only	.65 @ .70
Colored	.70 @ .90
White No. 2	.55 @ .57½
Kraft	.65 @ .70
Manila	.55 @ .57½
Kraft—	
No. 1 Domestic	5.25 @ 6.25
No. 2 Domestic	3.75 @ 4.50
Southern	3.50 @ 3.75
Imported	6.00 @ 7.00
Manila—	
No. 1 Jute	9.00 @ 9.25
No. 2 Jute	7.75 @ 8.50
No. 1 Wood	4.00 @ 5.25
No. 2 Wood	3.50 @ 4.00
Butchers	3.50 @ 4.00
Fibre Papers—	
No. 1 Fibre	4.75 @ 5.50
No. 2 Fibre	4.00 @ 4.75
Common Bogus	1.50 @ 3.00
Screenings	2.25 @ 3.00
Card Middles	4.00 @ 5.00
Glassine—	
Bleached, basis 25 lbs.	13.00 @ 16.00
Bleached, basis 20 lbs.	15.00 @ 16.00

(Delivered New York)

News, per ton—	
Rolls, contract	62.00 @ —
Rolls, spot	62.00 @ —
Sheets	67.00 @ —
Side Runs	47.00 @ 52.00
Boards—per ton—	
News	30.00 @ —
Straw	40.00 @ —
Chip	27.50 @ —
Binders' Boards	65.00 @ 70.00
85 Test Jute Liner	38.00 @ 40.00
Sgl. Mla. Ll. Chip	42.50 @ 45.00

(F. o. b. Mill)

Wood Pulp Boards	75.00 @ 80.00

Mechanical Pulp
(On Dock)

No. 1 Imported—	
Moist	28.00 @ 30.00
Dry	30.00 @ 32.00

(F. o. b. Mill)

No. 1 Domestic	26.00 @ 30.00

Chemical Pulp
(On Dock, Atlantic Ports)

Sulphite (Imported)—	
Bleached	3.00 @ 4.25
Easy Bleaching	2.60 @ 2.80
No. 1 strong unbleached	2.10 @ 2.65
Mitscherlich unbleached	2.25 @ 2.85
No. 2 strong unbleached	2.10 @ 2.35
No. 1 Kraft	1.65 @ 1.90
No. 2 Kraft	1.55 @ 1.65
Sulphate—	
Bleached	3.40 @ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—	
Bleached	2.65 @ 4.75
Easy Bleaching Sulphite	2.55 @ 2.75
News Sulphite	2.35 @ 2.60
Mitscherlich	2.75 @ 3.25
Kraft (Domestic)	2.10 @ 2.75
Soda Bleached	2.90 @ 3.20

Domestic Rags
New Rags
(Prices to Mill f. o. b N. Y.)

Shirt Cuttings—	
New White, No. 1	8.25 @ 8.75
New White, No. 2	7.25 @ 7.75
Silesias No. 1	6.50 @ 7.00
New Unbleached	8.25 @ 9.00
New Blue Prints	5.25 @ 5.50
New Soft Blacks	4.50 @ 5.00
Blue Overall	6.50 @ 6.75
Washables	4.25 @ 4.75
Fancy	4.75 @ 5.25
Mixed Khaki Cuttings	4.75 @ 5.25
Pink Corset Cuttings	7.50 @ 8.00
O. D. Khaki Cuttings	5.15 @ 5.75
Men's Corduroy	3.75 @ 4.25
New Mixed Blacks	3.50 @ 3.75

Old Rags

White, No. 1—	
Repacked	5.50 @ 6.00
Miscellaneous	4.50 @ 5.00
White, No. 2—	
Repacked	3.00 @ 3.50
Miscellaneous	2.30 @ 2.50
St. Soiled, White	2.00 @ 2.15
Thirds and Blues—	
Repacked	2.25 @ 2.50
Miscellaneous	1.75 @ 2.00
Black Stockings	3.25 @ 3.75
Roofing Rags—	
Cloth Strippings	1.25 @ 1.30
No. 1	1.25 @ 1.30
No. 2	.90 @ 1.00
No. 3	.70 @ .80
No. 4	.65 @ .70
No. 5A	.50 @ .60

Foreign Rags
New Rags

New Dark Cuttings	2.30 @ 2.50
New Mixed Cuttings	2.25 @ 2.75
New Light Silesias	6.25 @ 6.50
Light Flannelettes	6.50 @ 7.00
Unbleached Cuttings	9.00 @ 9.50
New White Cuttings	7.75 @ 8.50
New Light Oxfords	6.00 @ 6.50
New Light Prints	4.75 @ 5.25

Old Rags

No. 1 White Linens	7.25 @ 7.50
No. 2 White Linens	5.75 @ 6.75
No. 3 White Linens	4.75 @ 5.25
No. 4 White Linens	3.00 @ 3.50
No. 1 White Cotton	5.50 @ 5.75
No. 2 White Cotton	4.50 @ 5.00
No. 3 White Cotton	3.00 @ 4.00
No. 4 White Cotton	1.70 @ 1.80
Extra Light Prints	2.75 @ 3.00
Ord. Light Prints	2.15 @ 2.40
Med. Light Prints	1.65 @ 1.75
Dutch Blue Cottons	2.00 @ 2.10
French Blue Linens	2.65 @ 2.75
German Blue Linens	2.25 @ 2.40
German Blue Cottons	1.85 @ 1.90
Checks and Blues	1.85 @ 1.90
Lindsay Garments	1.20 @ 1.30
Dark Cottons	1.00 @ 1.10
Old Shopperies	.95 @ 1.00
New Shopperies	.95 @ 1.05
French Blues	1.90 @ 2.00

Old Rope and Bagging
(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—	
Foreign	1.50 @ 1.60
Domestic	1.65 @ 1.75
Wool Tares, light	1.35 @ 1.45
Wool Tares, heavy	1.40 @ 1.45
Bright Bagging	1.35 @ 1.45
Small Mixed Rope	1.15 @ 1.25
Manila Rope—	
Foreign	2.85 @ 3.00
Domestic	3.25 @ 3.50
New Burlap Cut	2.25 @ 2.50
Hessian Jute Threads—	
Foreign	3.50 @ 4.00
Domestic	2.50 @ 2.75

Old Waste Papers
(F. o. b. New York)

Shavings—	
Hard, white, No. 1	3.00 @ 3.25
Hard, white, No. 2	2.40 @ 2.55
Soft, white, No. 1	2.80 @ 2.90
White envelope cuttings	2.95 @ 3.10
Flat Stock—	
Stitchless	1.05 @ 1.15
Overissue Mag.	1.05 @ 1.15
Solid Flat Book	.90 @ 1.00
Crumpled No. 1	.80 @ .90
Solid Book Ledger	1.90 @ 2.00
Ledger Stock	1.05 @ 1.15
New B. B. Chips	.30 @ .35
Manilas—	
New Env. Cut.	2.10 @ 2.25
New Cuttings	1.40 @ 1.60
Extra No. 1 old	1.25 @ 1.35
Print	.60 @ .65
Bogus Wrapper	.60 @ .65
Container	.35 @ .45
Old Kraft Machine—	
Compressed bales	1.35 @ 1.45
News—	
No. 1 White News	1.77 @ 1.87
Strictly Overissue	.45 @ .50
Strictly Folded	.35 @ .40
No. 1 Mixed Paper	.25 @ .30
Common Paper	Nominal

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INTERNATIONAL ACCEPTANCE BANK, INC.

A Unit of THE MANHATTAN COMPANY

31 Pine Street New York

Starch—

A SIMPLE change in the manufacturing process often results in a pronounced decrease in cost of production.

Paper Mills use Starch for sizing to produce better and stronger sheets with lower cost of manufacture.

Our SPECIAL PAPER brand, furnished in either Pearl or Powdered form for beater-sizing, increases strength of sheet and gives improved finish.

Our FOX HEAD brand for top-sizing is more economical than all glue-size.

CORN PRODUCTS REFINING COMPANY

17 Battery Place, New York City

FAIRBANKS

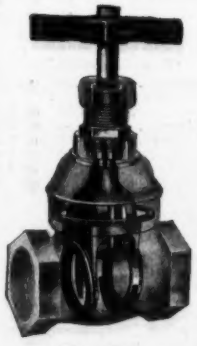

Fig. 0201

Renewable Seat Ring Gate Valves

are built to give service under the most severe conditions.

The renewable features have been perfected, are simple and may be relied upon as being entirely effective.

Renewals can be easily and quickly made, when necessary, without taking the valve from the pipe line.

Screw End and Flange End types.
Made in Bronze or of metals to meet special conditions.
Good for 150 lb. Steam Working Pressure

Write for Descriptive Bulletin and No. 20 Valve Catalog.

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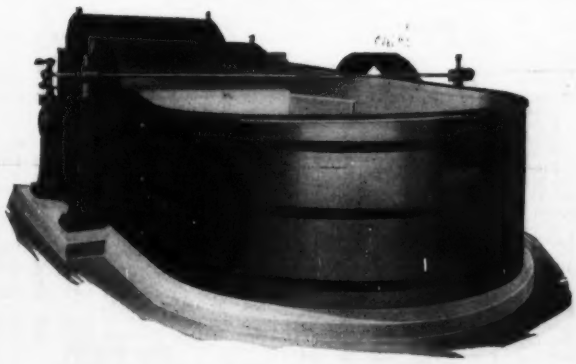
Distribution in All Principal Cities.



Putting Production into *High Gear*

In scores of paper mills whose annual schedules total millions of tons, Dayton High Speed Beaters are famous for their power, endurance and performance. A heavier furnish—faster beating—less jordaning—less power required—these proven features will put your production in high gear, too. Shown above: Dayton High Speed Beater with cypress tub, 61" dia. by 60" face. Nine of these recently went into a prominent mill, because Dayton specializes on the right beater for the particular task at hand. Years of technical experience—knowledge of paper making—prestige of serving the world's largest mills—these are at your command when you consult this organization.

THE DAYTON BEATER & HOIST CO., DAYTON, OHIO

Eastern Representatives
Mansfield, Bolton & Kent
501 Fifth Ave., New York City

Western Representative
F. H. Godfrey
415 Lenora St., Seattle, Wash.

DAYTON
High Speed Beaters

Twines
(F. o. b. Mill)

Cotton—			
No. 1	.22	@	.24
No. 2	.21	@	.22
No. 3	.19	@	.20
B. C., 18 basis	.32	@	.34
A. Italian, 18 basis	.39	@	.40
Finished Jute—			
Dark 18 basis	.20½	@	.21
Light 18 basis	.22½	@	—
Jute Wrappings, 3-6 Ply—			
No. 1	.14¾	@	—
No. 2	.13¾	@	—
Tube Rope—			
4-ply and larger	.10¾	@	—
Fine Tube Rope—			
4-ply	.12¾	@	—
3-ply	.13¾	@	—
2-ply	.14¾	@	—
Paper Makers Twine			
Balls	.08¾	@	—
Box Twine, 2-3 ply	.09	@	.10
Jute Rope	.11	@	.12
Amer. Hemp, 6	.29	@	.31
Java Sisal			
No. 1 Basis	.14½	@	.15½
No. 2 Basis	.13½	@	.14½
New Zealand Sisal	.13½	@	.15½
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Twine	.22½	@	.24½

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¾
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05¾	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	5.00	@	5.50
Southern Kraft	3.75	@	4.00
No. 2 Kraft	3.75	@	4.00
Wood Tag Boards	.04¾	@	.06¾
Sulphite Sreenings	.03	@	.03¾
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¾	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	30.00	@	35.00
Solid News	37.50	@	—
Solid News	32.50	@	37.50
Manila Lined Chip	40.00	@	45.00
Container Lined—			
85 Test	50.00	@	55.00
100 Test	55.00	@	60.00

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White Env. Cut-	2.35	@	2.40
No. 1 Soft Shavings	2.10	@	2.15
No. 1 Mixed	.30	@	.35
No. 2 Mixed	.25	@	.35
Ledger & Writings	.90	@	.95
Solid Books	.90	@	.95
Blanks	1.60	@	1.65
Krafts	1.30	@	1.40
New Kraft Cuts	1.50	@	1.70
Manila Envelope Cuttings	1.65	@	1.70
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.45	@	.50
Folded News (over-issue	.40	@	.45
Old Newspapers—			
No. 1	.35	@	.40
No. 2	.30	@	.35
Mixed Papers—			
No. 1	.30	@	.35
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.05	@	.40
Ledgers	.08	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.09	@	.20
Book, M. F.	.05	@	.07
Book, S. S. & C.	.05	@	.07½
Book, Coated	.09	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.07	@	.09
Manila Sul., No. 1	.03½	@	.05½
Manila No. 2	.03	@	.04
No. 1 Kraft	.05¼	@	.06
No. 2 Kraft	.03½	@	.04
Southern Kraft No. 1	—	@	.03¾
Southern Kraft No. 2	—	@	.03½
Common Bogus	.03	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	70.00
News Board	32.50	@	35.00
Chip Board	30.00	@	32.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.09	@	.09½
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.08½	@	.09
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03¼
Fancy	.05	@	.05½
New Black, Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.65	@	2.75
No. 2 Hard White	2.30	@	2.50
No. 1 Soft White	2.25	@	2.50
No. 2 Soft White	1.40	@	1.60
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.60	@	.70
Solid Ledger Stock	1.55	@	1.65
Writing Paper	1.05	@	1.25
No. 1 Books, heavy	1.00	@	1.15
No. 2 Books, light	.90	@	.95
No. 1 New Manila	2.15	@	2.30
No. 1 Old Manila	1.50	@	1.60
Print Manila	.50	@	.60
Container Manila	.45	@	.50
Old Kraft	1.35	@	1.40
Common Paper	.25	@	.35
No. 1 Mixed Paper	.25	@	.30
Straw Board, Chip	.35	@	.40
Binders Board, Chip	.35	@	.45
Corrugated Board	.50	@	.60
Overissue News	.45	@	.50
Old Newspaper	.25	@	.30

Domestic Rags (Old)

White No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
M. G.	6.00	@	—
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.25	@	1.30
No. 2	.70	@	.75
No. 3 (Roofing)	.30	@	.40
No. 4	.30	@	.40
No. 5A	.70	@	.75
B	.40	@	.60
C	.25	@	.30

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.12½
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.04¾	@	.06
No. 2 Kraft	.03¾	@	.05
(Less car-freight to Boston)			
Southern Kraft	.03¾	@	.04¼
(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)			
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls .009			52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	32.50	@	—
Chip Board	30.00	@	—
Chip Board (Special)	32.50	@	—
Single Manila Lined Chip	45.00	@	—
Single White, Patent Coated Newsboard Bender	65.00	@	80.00
Wood Pulp Board	75.00	@	80.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.40	@	2.50
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	—	@	2.25
No. 1 Books, Heavy	1.00	@	—
No. 1 Books, Light	.85	@	—
Crumpled Stitchless Book Stock	—	@	.70
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	—	@	1.00
White Blank News	1.50	@	1.60
Old Kraft	1.30	@	1.35
Print Manila	.75	@	.80
No. 1 Mixed Paper	.20	@	.25
Overissue News	.35	@	.40
Old Newspapers	.37½	@	.40
Box Board, Chip	.50	@	.55
Corrugated Boxes	.40	@	—

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.65
Domestic	1.60	@	—
Manila Rope—			
Foreign	2.75	@	3.00
Domestic	—	@	3.50
Transmission Rope	2.35	@	2.50
Mixed Strings	.75	@	1.00
Jute Wool Strings	1.00	@	—
Jute Carpet Threads	1.00	@	1.10
Scrap Burlaps	1.30	@	1.35
Scrap Sisal	—	@	1.50
Scrap Sisal for shredding	—	@	1.75
Wool Tares, heavy	—	@	1.40
New Burlap Cutting	1.75	@	2.00
Australian Wool Pouches	2.50	@	2.75
Heavy Baling Bagging	2.00	@	2.10

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1.	.07½	@	.08
New White No. 2.	—	@	.06
Silesias No. 1	.06	@	.06¼
New Unbleached	—	@	.09¼
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04½
Khaki Cuttings	.04	@	.04¼
O. D. Khaki	.04½	@	.05
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	1.90
Black Stockings	3.65	@	4.00
Roofing Stock—			
No. 1	1.25	@	1.50
No. 2	.90	@	1.00
No. 3	.85	@	.90
No. 4	.75	@	.85

Foreign Rags
(F. o. b. Boston)

Dark Cottons	.90	@	.95
New No. 1 Shirt Cuttings	8.00	@	8.50
Dutch Blues	—	@	2.00
Lace Curtains	4.00	@	4.25
New Checks & Blues	4.25	@	4.60
Old Fustians	1.65	@	1.75
Old Linsey Garments	1.50	@	—

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¾	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	10.00	@	11.50
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.00	@	—
No. 1 Manila	5.40	@	—
Fiber	5.40	@	—
Kraft, M. F.	5.90	@	—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	30.00	@	32.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	72.50	@	75.00
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writ-Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.06¼	@	—
Fancy Shirt Cuttings	.06	@	.06¼

Advertising matter paged consecutively with text, has been removed here to lessen the bulk of this volume.